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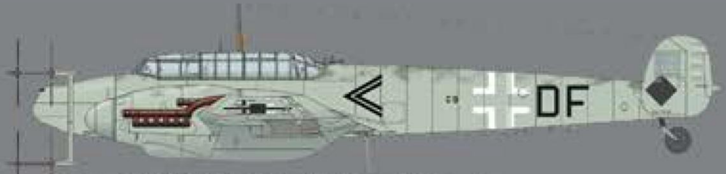
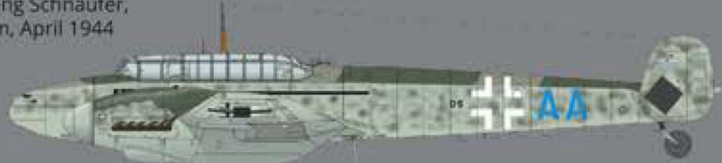
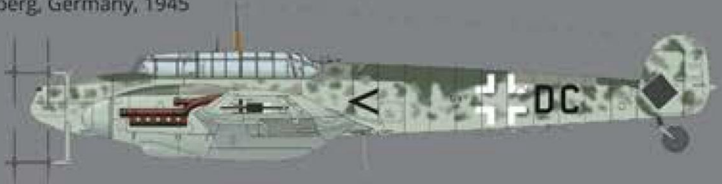


W.Nr. 720260, Oblt. Heinz-Wolfgang Schnaufer, Stab IV./ NJG 1, St. Trond, Belgium, April 1944

Hptm. Wilhelm Johnen, 7./NJG6, Neubiberg, Germany, 1945



Maj. Helmut Lent, the CO of Stab NJG 3, Stade, Germany, September 1944



Stab II./NJG1, Bad Langensalza, Germany, 1945

005 General Dynamics F-16C Block 52+of the Hellenic Air Force 335 Mira Squadron, based at Araxos. Seen here returning to the ramp after the morning sortie sporting some great looking conformal fuel tanks.

WRITTEN AND PHOTOGRAPHED BY MARCUS JELLYMAN

NATO TIGERS

We bring you some of the highlights from Zaragoza, home of the 2016 Tiger Meet

The annual NATO Tiger Meet was this year hosted by the Ala 15 of the Spanish Air Force at Zaragoza Air Force Base in Northern Spain. The event was held over two weeks in May of last year and was attended by no less than 19 NATO Tiger Members and with several visiting units that made the event the largest in Tiger Meet history. Over 100 aircraft participated in the event and during the two week period over 1000 sorties were flown from the vast southern ramp area at Zaragoza.

At the end of the first week, the base hosted a media/spotters day on the 20th of May for enthusiasts to get up close and photograph the proceedings. Over 1500 enthusiasts descended on the airfield for a full day's action in some typically beautiful Spanish weather. The day didn't get off to a great start with the promised 6pm finish being bought forward to 2pm and an announcement that only a handful of aircraft would take to the sky. Fortunately for us, during the lunch break the Tiger association crew persuaded the Spanish Air Force to allow us to stay on base for the mass afternoon launch, which would also favour the position of the sun for photography.

The following day the base hosted a small air display and opened its doors for the general public to get up close to the specially painted aircraft that had been positioned into a static display. We were gifted with another beautiful day which gave us photographers another chance to grab a few more shots before heading home. Collectors of squadron memorabilia were spoilt for choice with most squadron having a stand that sold everything from patches to flight bags.

Grumman E-2C Hawkeye of the French Navy (Aéronavale) from 4F based at BAN Lann-Bihoué. Seen in this stunning colour scheme it was one of a pair of E-2's that attended the event. Sadly engine problems kept the aircraft on the ground during our visit.

General Dynamics F-16C Block 52+of the Hellenic Air Force 335 Mira Squadron, based at Araxos. The sun had moved for the afternoon making for some great conditions to photograph, in.

Dassault Rafale M of the French Navy's 11 Flottille based at BAN Landivisiau, looking great in the 'M' configuration, it is seen taxing back to the ramp after the final sortie of the day.

Dassault certainly know how to produce a beautiful aircraft, and the Rafale M is no exception. This aircraft has been busy with over 85 bomb drops indicated on the nose.

In keeping with tradition, each year trophies are awarded as part of the meet with the coveted 'Silver Tiger' being the main prize. This year's winners were:

Silver Tiger Trophy: 31 Smaldeel – Belgian Air Force
Best Flying Unit: Flotille 11F – French Navy
Best Painted Tiger Aircraft: 221 Letka BitevnÍch VrtulnÍku – Czech Air Force
Best Looking Uniform: 21° Gruppo – Italian Air Force
Tiger Games: 31 Smaldeel – Belgian Air Force
Best Skit: 338 Skyvadron – Norwegian Air Force

The Tiger Meet never fails to impress, and after a shaky start the event turned into a fantastic couple of days photographing some of the finest aircraft to grace the skies. There is also the social side to the event too; meeting up with friends from around the world and having a good catch up over a few cold beers!

Next year's NATO Tiger Meet will be hosted by the French Navy at BAN Landivisiau in Brittany, France. See you there!

This year the German Air Force sent their Eurofighter Typhoons over the Tornado's (although two did visit), with no less than nine aircraft. 30+42 Typhoon from Fighter Wing 74 based at Neuberg lifts its air brake for the masses.

TAIL ART

As you can see, access was fantastic allowing the enthusiasts to get up close and personnel with the active aircraft.

Two Tornado ECR's from TLG51 of the German Air Force base at Schleswig Air Base were welcome visitors to the event, with 46+55 seen passing the crowds heading back to its parking spot.

The Turkish Air Force with their General Dynamics F-16 Block 50 aircraft are always a great addition to the event. 91-0022 F-16D from 192 Filo based at Balikesir Air Base poses to the delight of the photographers.

N°627 30-JO Dassault Mirage 2000D of the French Air Force from ECE 01/330 based at BA118 Mont-de-Marsan in the South of France was painted in this fantastic colour scheme sporting a Tiger with the Spanish flag in its mouth.

The French Air Force is renowned for great colour schemes and this year's Mirage 2000D with its Spanish flags was a winner.

N°642 30-IE French Air Force Mirage 2000D wore its regular markings from its home base at Mont-de-Marsan. It's not only the aircraft that get the fancy paint colour scheme, as can be seen from the crew flight helmets.

664 General Dynamics F-16AM of the Royal Norwegian Air Force's 338Skv based at Ørland sporting this stunning 'flaming' Tiger tail colour scheme. This old timer was delivered to the RNAF 34 years ago in 1982!

3366 Mil Mi-35 Hind of the Czech Air Force looking even more menacing in it stunning 'Alien' colour scheme performing for the awaiting photographers.

These striking tail markings were only applied on 005 F-16C of the Hellenic Air Force for Saturdays open day and soon peeled away during the following week's sorties.

N°19 Dassault Rafale M of the French Navy's 11 Flottille based at BAN Landivisiau, sported this very apt tail design featuring a Sea Horse combined with Tiger stripes.

Being a big French Air Force fan, this was probably my favourite scheme from the event. As well as the main colour scheme, the addition of nine stars on the top of the fin was to commemorate the loss of nine air/ground crew that were killed on another exercise in Spain where at Greek Air Force F-16 lost control on take-off and flew into other aircraft being readied for start-up.

Subtle but very striking markings on this Polish Air Force Block 52 F-16C from 6 ELT based at Pozan-Krzesiny Air Base.

Spanish Air Force squadron Ala 15 were the hosts for this year's Tiger Meet and painted one of their EF-18M's with these beautiful tails markings for the event.

The stunning tail markings of Turkish Air Force General Dynamics F-16C 92-0014 during the Spanish Air Force Zaragoza Base open day.

Swiss Hornet J-5011 has worn many Tiger marking over the years and is seen here sat on the scorching Zaragoza AB ramp. The large number '11' is the unit the aircraft is from, Staffel 11 based at Meiringen in amongst the beautiful Swiss Alps.

The deserved winner of the ‘Best Tiger Scheme’ was this truly stunning Alien/Tiger combo from the Czech Air Force and their Mil Mi-35 Hind.

Alongside the Mil Mi-35 Hinds was a very welcome Mil-17 Hip from the Czech Air Force.

3370 Mil Mi-35 of the Czech Air Force was painted in this commemorative colour scheme to mark the end of WWII and replicates the markings of RAF 311Sqn Liberator EV953 PP-K that was written-off on the 20th August 1945.

Not to be outdone by the Air Force, the French Army were present with this beautifully painted SA.324M Gazelle. N°3862 GAL is from 3 RHC (ALAT) based at d’Étain-Rouvres.

9236 JAS-39C Gripen of the Czech Air Force’s 211TL Squadron based at Cáslav Air Force Base was one of four aircraft from the unit.

Another shot of 9236 JAS-39C Gripen from the Czech Air Force seen at rest during the base’s Open Day.

Block 52 General Dynamics F-16C 4055 of the Polish Air Force taxi’s back to it hard stand during the afternoon mass launch, complete with conformal fuel tanks.

Whether it be a regular air show or something like the Tiger Meet, the Turkish Air Force always make a special effort to bring some colour to the party. This year their ‘Tiger’ scheme was no exception, and was by far my favourite F-16 present.

Not to be outdone, 31 Smaldeel from the Belgian Air Force painted FA-77 F-16AM in this striking colours scheme. The squadron were to go on and win the coveted 'Silver Tiger' Trophy.

This year's Belgian Air Force display aircraft (FA-123) was also in attendance and took part in both the days' missions.

The port side of Belgian Air Force F-16AM FA-77 differs from the starboard side in have a large '65' on the tail to celebrate the squadrons 65th Anniversary.

The host's stunning EF-18M passes the line of photographers at the end of the morning sortie. C.15-14/15-01 has been with the Spanish Air Force for 30 years being delivered in November 1986.

230 Squadron is the Royal Air Force's Tiger Squadron with their Puma HC.2's from RAF Benson. Sadly the only marking on the aircraft was a panel bolted onto the nose once the aircraft had landed!

It was great to hear the distinctive sound of the two Italian Air Force AB.212 ICO 'Huey's' during the day. Both looked great too with the crews going to town on the decoration inside and out. Here's MM81161/9-61 from 21°Gruppo based at Grazzanise.

With its wings stowed, F/A-18C Hornet J-5011 of the Swiss Air Force returns to the ramp under some glorious Spanish sun.

1/48
SCALE
必勝

Two F-4J(UK)s on their transit flight to the UK in 1984, each flight was supported by a VC10.

WRITTEN BY MODEL AIRPLANE INTERNATIONAL

MCDONNELL DOUGLAS F-4J(UK) PHANTOM

During the 1980s the Cold War was still at its height and the United Kingdom had already been involved in one conflict with Argentine in 1982, tensions were high and the RAF was at the forefront of keeping the United Kingdom and its skies clear of threats. This role now included the skies over the Falkland Islands, the hard-fought battles won by the Army and Royal Navy needed to be protected as the war of words between London and Buenos Aires continued on through 1982 and into the following year. A message needed to be sent and providing a viable and potent air defence would be a clear indication to the Argentinian military that the UK was 'keeping the islands'.

The RAF was given the task of coming up with an air defence solution, that would be both potent, quick and cost effective – a task that would see senior RAF officers being given a blank page on which to submit ideas. Their immediate task was to replace the Fleet Air Arm's Sea Harrier FRS.1s and RAF's GR.3s, that would be either based aboard a carrier deployed to the area or in case of the RAF's GR.3s, operate from the temporary airfield at Port Stanley. These were a just make-shift solution, despite the 'jump jets' successes over the Argentine Air Force and Navy, the Harriers that remained on the islands after the conflict lacked the suitable range and firepower to fulfil a true air defence role.

Back in the UK, air defence was the responsibility of No.11 Group equipped with English Electric Lightnings and McDonnell Douglas F-4 Phantoms and then due to enter service within the next few years, Tornado ADVs. The Phantoms were located at three airbases within the UK, RAF Leuchars, Wattisham and Coningsby, comprising a total of five squadrons, (228 Operational Conversion Unit (OCU) would adopt the 62 Squadron number plate during wartime), two of which flew ex-Royal Navy FG.1s (43 and 111 Squadrons) while the rest operated FGR.2s.

Compared to today's RAF, these numbers seem incredible, but back in 1982, it was clear that the need to provide an adequate air defence, indefinitely for the Falklands at the planned new air base of RAF Mount Pleasant would mean that additional aircraft would be needed. The choice of fighter to send to the islands was obvious: the Phantom. It ▶

An F-4J(UK) ZE364 in its HAS at RAF Wattisham. The Phantom is fitted with a drill Sidewinder body on its wing pylon and practice Sky Flash missiles in the forward missile bays. These were routinely carried in order to maintain the Phantom's centre-of-gravity. All images Glenn Sands collection.

Basking in the April 1988 sunshine ZE350/T shows the standard training configuration of 74 Squadron's F-4s. This was the only F-4J(UK) not to have the empty DECM antennas on the upper intakes.

The DECM antennas on the intake shoulders were empty. They had a matt black forward section. Note the two-tone camouflage radome.

Post flight checks are carried out on the ZE351/I after it arrives at the airshow in the UK. It was unusual to see RAF Phantoms in a 'clean' configuration.

Yet to receive its black tail ZE357/N shows the lack of weathering and clean airframe that the F-4J(UK) s retained throughout their operational service.

An RAF Phantom crew waves to the photographer as they prepare to depart for a squadron exchange to the continent. Note the baggage pods on the wing pylons. The aircrew sport decorated USN Navy style helmets.

The tiger emblem carried on the nose of the F-4J(UK)s.

How things ended up for 74 Squadron, with the retirement of the F-4J(UK)s surplus FGR.2s entered service with the squadron. The aircraft retained the black fins previously worn the F-4Js.

A replacement radome has been fitted to ZE356/Q in the proper RAF colours and illustrates the contrast between the original greys applied in the United States.

F-4J(UK) ZE356/S was specially painted for Cambrai Tiger Meet and the subject of a 1/72 Yellow Hammer decal sheet.

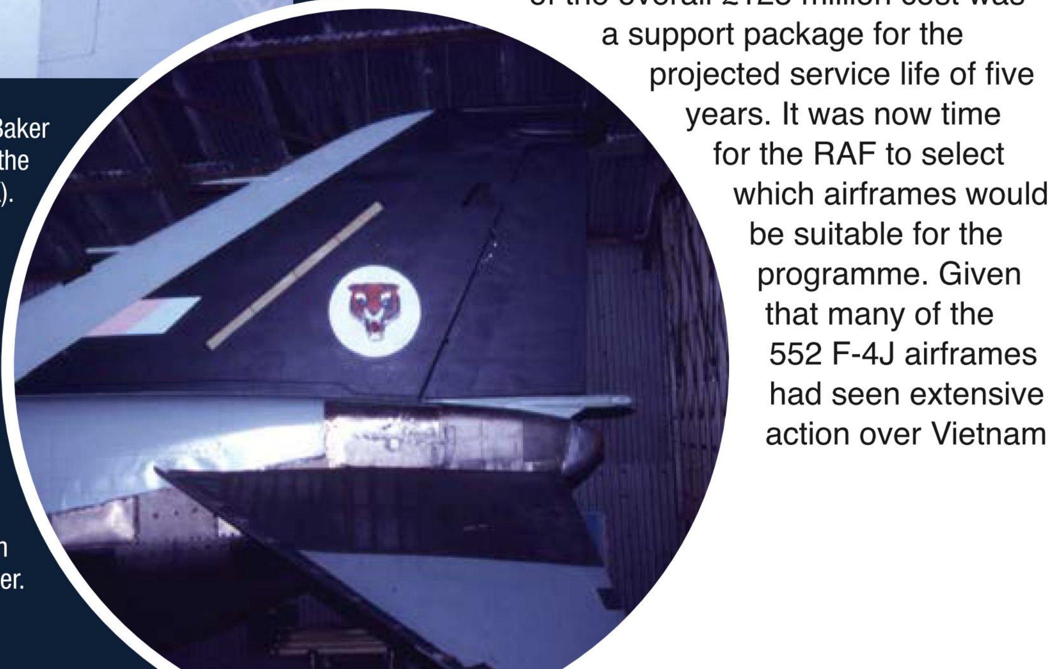
Approaching RAF Wattisham on finals through typically British murky weather ZE351/I returns after a local ACM sortie.

Phantom ZE362/V is equipped with a SUU-23/A gun pod on its centreline. Mounted on the pylons are drill AIM-9L Sidewinders.

Pulling up alongside the tanker, ZE361/P is fitted with a yet to be painted replacement radome but wears a fully black painted radome.

A 'live' weapon load carried on F-4J(UK) ZE363. This load comprises four AIM-9L Sidewinders, four Sky Flash AAMs. The drop tanks, despite the drag they create increase the range when at cruising speed by more than 50 per cent.

The two Type 7 Martin Baker ejection seats as fitted to the F-4J(UK).



The first black tail applied to an F-4J(UK) ZE363, although unofficially was completed in CFB Goose Bay during a stop-over due to a technical fault. Contrary to the what was expected, the Commanding Officer approved and, quickly instructed for the rest of 74 Squadron's jets to be painted in a similar manner.

the RAF's senior staff – the 'easy' solution acquire more Phantoms, which had, and were already proving their worth defending the UK Air Defence Region (UKADR) and, it was believed at the time, that little extra training would be needed for air and ground crews as there was already a pool of experienced knowledgeable Phantom staff serving in the RAF.

The solution was simple when viewed in this respect, to purchase stored former USN and USMC F-4J Phantoms, provide the jets with a basic upgrade that will allow them to operate seamlessly with the UK's Air Defence Region. The F-4J had been the base model that the FG.1 and FGR.2 had been developed from back in the late Sixties. The prospect of modifying the F-4Js to a 'full' UK specification was too expensive, so the decision was taken to introduce a third Phantom variant into the RAF's inventory. The 'new variant' would retain the J79-GE-108 engines and existing US avionics – critically the AWG-10 radar was compatible with the British F-4s already in service.

Fifteen Phantoms were deemed necessary at a cost of £2.2 million per jet, the new aircraft were to be designated the F-4J(UK), as part of the overall £125 million cost was a support package for the projected service life of five years. It was now time for the RAF to select which airframes would be suitable for the programme. Given that many of the 552 F-4J airframes had seen extensive action over Vietnam when serving with the USN, of which the 'best' had already been earmarked for upgrading to F-4S standards, the British contingent had to select its 15 examples from USN Naval Air Rework Facility (NARF) at NAS North Island and from storage at the Military Aircraft Storage and Disposition Center.

British Standard

The conversion work was performed at the NARF at North Island, and required removing several USN systems and adding British systems which brought the aircraft closer to the F-4S standard, although the provision for wing leading edge slats was not taken-up in order to keep costs as low as possible. Compatibility with Sky Flash missile was deemed essential. As this missile, had replaced the Sparrow and on the Phantom FG.1 and FGR.2 and new zero-hour J79 engines were installed. The aircraft's ejection seats, which were initially American H7 pattern, but these were subsequently replaced by Martin Baker Mk.4 rocket seats, which were compatible with the existing RAF fleet and therefore cheaper to maintain. When all the necessary modifications had been made, the aircraft were as good as new, even though some were combat veterans.

RAF crews were trained with VMAT-101 'Sharpshooters' at MCAS Yuma and the first rebuilt F-4J(UK) was rolled out on 10 August 1984. British crews wore USN flying equipment while operating the aircraft up until the type was withdrawn from service.

No 74 Squadron was formed at RAF Wattisham on 1 July 1984 to operate the fifteen F-4J(UK)s. The first three aircraft ZE352, ZE354 and ZE359 arrived at their new airfield on 30 August 1984. RAF crews brought

the Phantoms across in waves of three, flying via CFB Goose Bay supported by VC10 tankers.

One F-4J(UK) ZE363 suffered a mechanical failure during its transit flight and remained at Goose Bay for a few days. While awaiting repair the RAF crew sprayed the tail black in recognition of the squadron's Tiger status. The aircraft eventually arrived back in the UK on 11 November looking much more like a 'proper tiger squadron jet'.

A Real Dogfighter…

The F-4J(UK) was a very different aircraft to the FG.1 and FGR.2, but the changes were for the most part beneficial. It was only in terms of logistics that the introduction of the F-4J was regarded as anything but welcome. The F-4J's starting system was an issue that cause significant logistical problems for some time, and some components were specific to the F-4J variant, most notably those connected to the engines, but there were other items too such as the main wheels, which did not have an anti-skid system, as it obviously was not necessary on a carrier. This meant that on wet runways, many landings had to be accomplished courtesy of an arrester barrier in order to avoid the risk of the aircraft running off the runway.

Other minor changes to the F-4J(UK) meant that navigators who were transitioning from other RAF Phantoms found the layout of the rear instrument panel a challenge on early flights before they became accustomed to the US Navy style configuration. But on the positive side, the navigators in the F-4J had a much better view outside, as there were fewer pieces of equipment compared to the other British F-4s.

For the experienced Phantom aircrews that formed the basis of 74 Squadron, each had to have 1,000 hours on the Phantom prior to converting to the F-4K(UK). The crews were keen to exploit the performance of the re-furbished aircraft. Capable of reaching 60,000ft the FGR.2s struggled to maintain 45,000ft. The refurbished F-4J(UK)s were usually flown 'clean' or with only a single centreline tank, which allowed the aircraft to withstand up to 6G compared to the 3G limit imposed on the other F-4 fleet. The 'new' Phantoms quickly earned the reputation of being 'hot rods' within the RAF and 74 Squadron attended numerous NATO air defence exercises and air combat exercises.

All Over Too Soon?

The F-4J(UK)s were only ever viewed as a stop-gap and remained in service for only six years until the gradual wind-down of the FGR.2 fleet meant a surplus of British Spey-engined operational airframes were available. Along with this was the diminishing need for qualified F-4 aircrew. In 1990, it was decided that 228 OCU for the Phantom would disband and its FGR.2s would pass to 74 Squadron, with the first example arriving on 15 January 1991. Other FGR.2s followed as the UK's ADR squadrons slowly began to equip with Tornado ADVs and more FGR.2s became surplus to ▶

The contrast between the original US paintwork and the standard British colours is highlighted in this view. Some squadron personnel referred to the old scheme as Duck Egg Blue.

A close-up of the J79-GE-108 variable-geometry exhausts and the aircraft's arrester hook attachment point.

Looking every inch the proper tiger squadron aircraft, ZE360/O, this even extends to the aircrew's helmets which sport some intricate tiger artwork.

Now a warbird pilot at Duxford this F-4J(UK) was once the mount of Wing Commander Cliff Spink. Note the blue dummy Sky Flash missiles in the forward fuselage bays.

Pictured in 1988 at RAF Wattisham, ZE352/G is prepared by the ground crew at the aircrew receive final instructions over the radio. A single centre-line mounted 500-gallon tank was the standard on

The contrast between the original US paintwork and the standard British colours is highlighted in this view. Some squadron personnel referred to the old scheme as Duck Egg Blue.

The glossy blue-turquoise hue of the US-applied camouflage is evident in this view of ZE353/E in the static park at an airshow in 1986.

CAMOUFLAGE CONFUSION

The F-4J(UK)s arrived wearing an air defence scheme unlike any other then in current use by the RAF. Even today the subject represents a conundrum that has not entirely been resolved. The MOD line is that the aircraft were painted at NARF North Island, in glossy near-equivalents of the standard RAF Phantom scheme of Barley Grey BS4800-18B.2 and Medium Sea Grey BS381C-637 with Light Aircraft Grey BS381C-627 undersurfaces, using Federal Standard colours 36314, 36270 and 36440 respectively. The 36270 shade which is near to Neutral Grey, is the lighter of the two standard USAF F-16 uppersurface greys, incidentally, whilst 36440 used to be seen on the USMC's AV-8B's undersurfaces and it its glossy 16440 form was applied overall to many of the USN's Tomcats, as Light Gull Grey. The 36314 is the problem: as it is simply unlike samples of 36314 seen elsewhere! It had a distinctly greenish-blue hue (which was explained by the fact that it was applied thinly over a deep yellow primer) but more importantly it had a genuinely glossy finish as seen in the accompanying images.
During their operational service, at least three of the F-4J(UK)s were repainted in British Standard RAF air defence colours by April 1988 whilst undergoing a major service, however, a few kept their unique colours until their retirement in 1991.

TIGER TIMES AGAIN

No 74 Squadron formed at Northolt on 1 July 1917, and from March 1918 used SE5s on fighter and ground attack work, disbanding in July 1919. Re-formed on 3 September 1935 with Hawker Demons, it spent the next few months in Malta. In April 1937, it received Gloster Gauntlets and in 1939, Spitfires using the latter and Hurricanes throughout World War Two. The squadron later flew Meteors between June 1945 and May 1957, Hunters from March 1957 to November 1960 and Lightnings from June 1960 to August 1971. The squadron re-formed in October 1984 with 15 F-4J(UK)s at RAF Wattisham and was declared fully operational on 30 June 1985.

Aircraft/Serials of No 74(F) Squadron

Type	US BuNo	RAF Serial	Tail Code
F-4J	153768	ZE350	T
	153773	ZE351	I
	153783	ZE352	G
	153785	ZE353	E
	153795	ZE354	R
	153803	ZE355	S
	153850	ZE356	Q
	153892	ZE357	N
	155510	ZE358	H
	155529	ZE359	J
	155574	ZE360	O
	155734	ZE361	P
	155755	ZE362	V
	155868	ZE363	W
	155894	ZE364	Z

Note: ZE358/H was destroyed in a fatal crash on 26 August 1987 when it flew into the ground 10-miles south-west of Aberystwyth, Wales during a low-level training flight.

requirements.

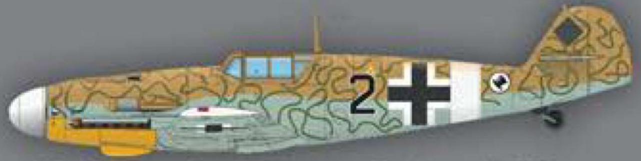
After a few years in service the unique F-4J(UK)s were now proving difficult to maintain and 74 Squadron swapped Phantom variants almost overnight and by January 1991, the squadron was fully equipped with Phantom FGR.2s. Now redundant, the F-4J(UK) airframes were dispatched to various RAF air bases to serve in the battle damage repair role. A sad end to ironically what many now view as the 'best' British F-4 variant that the RAF had, abet all too briefly. ■

An 'alert bird' F-4J(UK) in Wattisham's camouflaged 'Q' hangar in December 1985. Note the aircraft carries a pair of Sergeant Fletchers fuel tanks under the wings.

A fantastic view of ZE359. Note the subtle weathering.

Bf 109G-2

1/48



Bf 109G-2/trop, 2./ JG 77, Matmata, Tunisia, early 1943

Bf 109G-2/R6, W. Nr. 13633, Hptm. Wolf-Dieter Huy, 7./ JG 77, Tanyet Harun, Egypt, October 1942

Bf 109G-2/R-6/trop, W. Nr. 13916, Fw. Hans Döbrich, 6./ JG 5, Alakurtti, Finland, February 1943

Bf 109G-2/R6 W. Nr. 13949, Mjr. Hans Hahn, II./ JG 54, Rjelbitzy, Soviet Union, January 1943

Bf 109G-2/R6, Lt. Walter Krupinski, 6./ JG 52, Maykop, Soviet Union, October 1942

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VF-51 SCREAMING EAGLES F-14A
BUNO 160665 / NL101, CVW-15
USS KITTY HAWK CV-63, 1979

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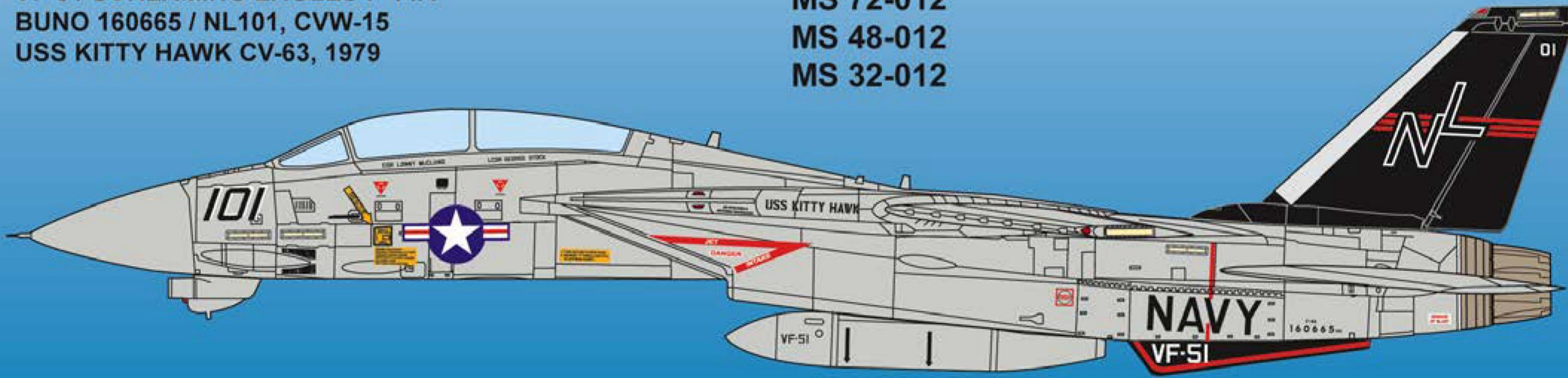

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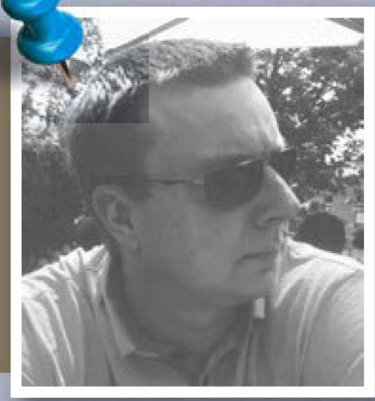

IN THIS ISSUE...

Written by Spencer Pollard

Hello everyone, welcome to the April 2017 edition of your favourite aviation modelling magazine!

This month we once again have much to enjoy, with models from across the spectrum of aviation modelling in miniature.

This month we take a detailed look at the brand-new MENG 1:48 P-51D Mustang. Advertised as a 'Glue Free' kit, MENG's kit offers a look at possible future kit construction, the cleverness of the design and simplicity with which it goes together, no doubt appealing to those looking for a simpler projects or beginners who are still developing their skills. Either way, it's a neat kit as we describe in detail beginning on page 16.

Alongside our look at this new P-51 kit, we thought it would also be fun to show you the Tamiya Mustang and compare the two products, painting each in different schemes, using different techniques. Building two similar kits like this was fun, fun that you can hopefully enjoy as well, beginning on page 32.

Along with the Mustang, we also take a detailed look at another very important release in the form of Airfix' stunning 1:72 Handley Page Victor B.2. Greg Phillips decided to tackled this huge project, painting the results in the wonderfully beguiling Ant-Flash White scheme along the way. Do you want to know more? Check out page 44 for the start of his extended feature.

We also have two other reviews this month in the form of the Kitty Hawk Banshee and Revell Ventura. Both of these attractive kits build up into interesting models of these famous aircraft, so we hope that you will enjoy seeing what is possible from their construction. Our features start on pages 36 and 56 respectively.

So this is the April edition of Model Airplane International. I hope you enjoy this issue and I hope to see you again next month! ■

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NEW TOOL

A very close look at "Miss Velma's" underside as she departs Duxford's grass at Flying Legends 2011. With the closure of the "tank bank" at the west end of the field during display flying (elf n' safety strikes again), this view looks to be not repeated any time soon.

WRITTEN AND PHOTOGRAPHED BY ALAN FIRBANK

MUSTANGS MUSTER

We take a look at some of the glorious P-51 Warbirds that can be seen in the skies over the U.K...

To go with the editor's review of Meng's new 1:48 Mustang and Tamiya's F-51D, we have a selection of photos of the real thing. They were all taken at various events at Duxford, mainly at the annual Flying Legends show held in July each year. If you would like to see dozens of warbirds in the air at the same time, this is the show to visit. Flying Legends is one of the biggest warbird shows in Europe and comes highly recommended.

Mustangs come in a variety of schemes and we bring you examples of a few. Mustang decal sheets are plentiful in all of the common scales therefore you should find a scheme that catches your eye. Those wishing to sidestep a natural metal finish will find plenty in Olive Drab over Neutral Grey. With recent new releases in 1:72 and 1:48, Mustangs fans are having a good time.

It is always sad when one of those valuable aircraft is lost and in 2011 at the Flying Legends show, P-51D "Big Beautiful Doll" sadly crashed during the show finale. A Skyraider's wing tip caught the Mustang under the rear fuselage, sending the Mustang into a cornfield just off Duxford's western boundary. Pilot, Rob Davies managed to exit the striken plane, took to his parachute and escaped with a few bruises. The Skyraider flew on and landed normally with several feet of right wing missing. Following repairs, the Skyraider returned to France several months later than planned. ■

"Big Beautiful Doll' taking off for what would be its final flight at the end of the Flying Legends Show in 2011.

The collision damage to the Skyraider's outer wing after hitting "Big Beautiful Doll" is clearly visible in this photo.

Two visiting Mustangs at Flying Legends 2011.

P-51D "Fragile but Agile" carried a set of black bands on the upper wings.

Duxford-based The Old Flying Machine Company's P-51D "Ferocious Frankie" showing off a full set of underside D-Day stripes.

Another striking scheme on P-51K "Fragile but Agile" at Duxford in 2011. This Mustang is owned by the Comanche Fighters from Houston, Texas.

The other Duxford-based Mustang belongs to the Fighter Collection. "Miss Velma" was one of the last P-51s to be built and was converted to the two seat TF-51D configuration at Chino, California. The taller tailfin is a distinctive feature of most twin seat Mustangs.

The tall tail on this Cavalier F-51D-T.MK.2 is very obvious. This twin seat Mustang, based in Sweden, is a regular visitor to Duxford shows.

Bob Davies taxis 'Big Beautiful Doll" at Duxford. Note the highly-polished fuselage.

P-51D "February" at Duxford in 2011 with a flat metal finish in immaculate condition. The scheme is as flown by Jim Brooks from the 307th Fighter Squadron, 15th Air Force in Europe in 1944.

P-51D "Ferocious Frankie" ticks-over while awaiting take-off instructions at Duxford in July 2011. This is a great example of a scheme with a mix or natural metal and Olive Drab. Note the really smooth wing surface. I suspect the panel gaps have been filled and sanded smooth.

P-51D is now part of the Jean-Baptiste Salis Collection in France. The scheme is "Nooky Booky IV" as flown by Maj. Leonard 'Kit' Carson with the 362nd Fighter Squadron, 1944.

"Old Crow" at Duxford in July 2006, at this time the Mustang was operated by the Swedish Historic Flight. It is now in the RAF's No. 112 Squadron colours and operated by the Boultbee Flight Academy at Goodwood.

Mustang IVA GA-S is another UK-based Mustang currently based at Goodwood and operated by the Boultbee Flight Academy. The colours are of RAF No. 112 Squadron from later in WWII and make a change from American schemes. Those with deep pockets can fly in the rear seat. Again, the venue is Flying Legends, Duxford 2011.

A lovely three-ship Mustang formation, The Three Horsemen, brought together for Flying Legends 2011, performing a loop during a memorable display. They are the world's only Mustang formation aerobatic team

Mustang P-51D "Jumpin-Jacques" from the Hangar 11 Collection at North Weald, here seen on Kemble's runway. This is the fourth flying Mustang currently in the UK. "Jumpin-Jacques" is one of the most original Mustangs to have taken part in WWII combat that is still flying. It flew in the Mediterranean Theatre from early 1944 with the "Fighting Red Tails"/Tuskegee Airmen, in the scheme to which it has now reverted. The airframe has never had to be tampered with and is complete as flown in combat, even the bullet hole patches from those days are still visible on the Mustang. The "Jumpin-Jacques" scheme was carried on the box of one of Hasegawa's Mustang kits. (photo: Jeff Brown).

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WRITTEN AND PHOTOGRAPHED BY SPENCER POLLARD AND ALAN FIRBANK

JET PROVOST

The Jet Provost T.3/4 in flight and on display around the UK

In flight!

The Newcastle Jet Provost Company's Jet provost T.3A, XM479 shows off it's wonderful plumage. (Alan Firbank)

XM479 shows of it's wonderfully bright training colours. (Alan Firbank)

A: The intakes on Bruntingthorpe's camouflaged aircraft are finished in white. Note the anti-glare panel in front of the windscreen. B: The nose lights are apparent in this view, along with the small intake that can be seen just in front of the anti-glare panel. C: The canopy sections in the Airfix kit are quite plain and could do with some additional details, much of which can see seen here. D: Intake detail. Note the rivets and fasteners on this part of the aircraft. E: Though simple, the intake is a very subtle shape. Note the metal colouring inside this particular structure. F: XM365 would be a good subject for a model, its slightly weathered finish and mismatched panels, looking great in 1:72. G: 'No Step' stencil found on the leading edge of the wing. Note the subtle weathering.

Seen in its original South Arabian Air Force colours, Sword Aviation's T.52 looks superb in flight. (Alan Firbank)

Bruntingthorpe is home to a number of Jet Provosts, their T.4, XP672, can be seen here in the colours of 79 Squadron Royal Air Force.

Ready for its 'fast taxi', XP672 reveals its illuminated lights that form part of the nosecone of the aircraft.

The other Jet Provost seen at Bruntingthorpe is this T.3A, serial number XM365. Its bright training colours are in stark contrast to those seen on the other, 79 Squadron aircraft.

The aircraft's squat appearance on the ground and pronounced dihedral can both be seen in this shot.

The narrow track of the Jet Provost's undercarriage is very apparent here, as is the dihedral of the wings.

In our kit build the lights that form part of the tip tanks were added, here, they can be seen in detail.

Seen in blue and white civilian colours together with registration G-BWDS, Jet Provost XM 424 was built in Luton in 1960 and delivered to the RAF in April to RAF Shawbury for pre-service preparation, before service at RAF Little Rissington where she served with the Central Flying School. (Alan Firbank)

Ready for another flying display, XM479 reveals some of the aerials fitted under the nose of the aircraft. (Alan Firbank)

As seen on our review build, the area around the jet pipe remains in polished natural metal.

FINAL THOUGHTS

SO MANY MODELS, SO LITTLE TIME...

One of the great things about this job is that you don't really know day to day, what you are going to see, going to receive, or going to build. Okay, the latter is a little off because you might be in the middle of a project, but you know what I mean.

This week has been no different. I started off with precious little idea of what to build and now I have more than I can handle as samples have arrived en masse. Being faced with such a wide choice of models now means that I have to decide on what to keep to build, what to send out and what to leave alone in terms of full features.

Choosing a kit to build can sometimes be less than straightforward. If I was the kind of modeller that stuck to one scale, one genre and a single time period it may be easy; the fact that I jump around all three like a particularly skittish grasshopper, tends to make the choice more difficult. Think kid in a sweet shop and you'll get the general idea.

So last week the Kitty Hawk 1:48 Su-17 arrived which is being worked on as we speak and then this week my planned Italeri 1:32 F-35A and then Revell 1:32 Spitfire Mk.IXc. Add to that a few other background jobs (including two 1:48 A-10A builds…) and you get some idea of the confusion that too much choice can cause!

Of course it is great to be in this position, because it keeps the job — and hopefully in the case of our readers who face similar dilemmas, the hobby — fresh and exciting. It wouldn't be much fun to have nothing that you fancy having a go at, time at the bench being accompanied by blank stares and frustration. But it does mean that you have to be selective, prioritising what we see and you buy, to maximise the time available to build the wonderful kits that are released, seemingly, every day.

I'll complete the Su-17 and then start work on the F-35A as planned and then after that, who knows: Spitfire maybe? Those A-10As? How about another Harrier..?

See you next time!

WRITTEN BY SPENCER POLLARD, WITH HISTORY FROM WIKIPEDIA AND IMAGES FROM SOTIRIS CONSTANDINIDIS AND GRAND MODELS.

T-6A TEXAN II

In preparation for our build feature, we bring you some full-sized reference shots should you wish to build something just a little different from what's supplied in the Grand Models box.

The Beechcraft T-6 Texan II is a single-engine turboprop aircraft built by the Raytheon Aircraft Company (which became Hawker Beechcraft and later Beechcraft Defense Company, and was bought by Textron Aviation in 2014). A trainer aircraft based on the Pilatus PC-9, the T-6 has replaced the Air Force's Cessna T-37B Tweet and the Navy's T-34C Turbo Mentor. The T-6A is used by the United States Air Force for basic pilot training and Combat Systems Officer (CSO) training and by the United States Navy and United States Marine Corps for Primary and Intermediate Naval Flight Officer (NFO) training. The T-6A is also used as a basic trainer by the Royal Canadian Air Force (CT-156 Harvard II), the Greek Air Force, the Israeli Air Force (Efroni), and the Iraqi Air Force. The T-6B is the primary trainer for U.S. Student Naval Aviators. The T-6C is used for training by the Royal Moroccan Air Force, the Royal New Zealand Air Force, and the Mexican Air Force.

From whatever angle you choose to admire the sweeping lines of the Texan, the results are almost always attractive. (Sotiris Constandinidis)

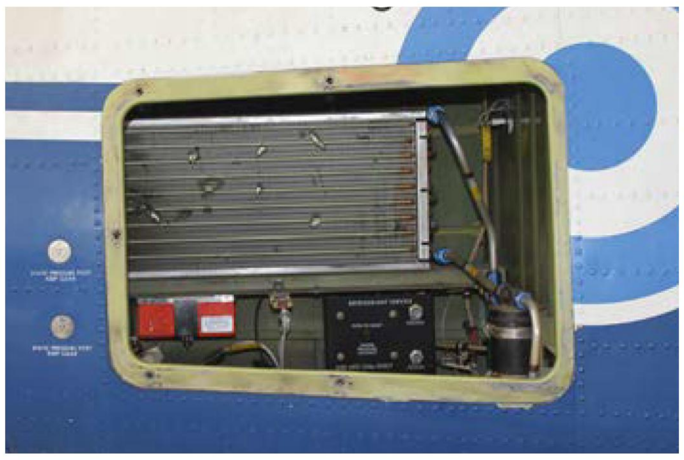
With Flaps drooped, a Greek Air Force T-6A is seen moments before landing. (Sotiris Constandinidis)

Close up view of the Pratt & Whitney Canada PT6A-68 turboprop, engine. Noisy but efficient, this little powerplant will get the aircraft up to, but never in excess of, 364mph. (Grand Models)

The jet exhausts dominate this view of the Texan's turboprop engine. Removal of the nose panels allows those that wield spanners rather than control columns, the chance to do their thing without damage to fingers, or aircraft. (Grand Models)

Though operating in a bright, glossy, blue and white scheme, the undersides can get rather rather filthy in service. Out of sight, out of mind… (Sotiris Constandinidis)

Sat on the flightline, this T-6a reveals many of the panels that can be opened for servicing and preflight checks. Though interesting to look at, the groundcrew, if not the aircrew, will be keen to ensure that these are nicely closed before the aircraft leaves the ground. (Sotiris Constandinidis)



The open access panel on the starboard rear fuselage reveals details of what looks to be the aircraft's air-conditioning unit. Greece is a hothouse, so a little cool air under that massive, blown sheet of perspex would be not only welcome, it would be essential. (Grand Models)

It takes nerve to flying this low to the ground with wheels up, but if you can master it as a pilot, why not when the resulting image of your endeavours, looks this good? (Sotiris Constandinidis)

The ambient air temperature may still be up into the 30s, but at least the use of open hangers allows some degree of shade for those who may need to prepare the aircraft for flight. (Sotiris Constandinidis)

Once disturbed by the sound of Turbo Mentor engines, TAW-5's home base of NAS Whiting Field now reverberates to the sound of T-6A Texans that continue to fly in the U.S Navy's attractive orange and white plumage. (US Navy image)

Bubble canopy locked down, aircon unit cranked up to the max, another Whiting Field based Texan awaits its turn to fly. (US Navy image)

Formation flying is a skill that needs perfecting, so crews spend considerable time in close proximity to each other, if only for photo-ops such as this, rather than tactical need. (Sotiris Constandinidis)

Armed with an alarmingly drab underwing gun pod, this aircraft still looks picture-perfect over the sprawling metropolis of Athens. (Sotiris Constandinidis)

Not to be outdone by their Navy counterparts, the USAF also flies the Texan, the 558th Flying Training Squadron out of Randolph Air Force base being home to this particularly fine, chrome-trimmed example. (USAF image)

Hptm. W. Moritz, CO of IV.(Sturm)/JG 3, Memmingen, Germany, July 1944

W. Nr. 682989, 5./JG301, Germany, May 1945

W. Nr. 682958, Uffz. P. Lixfeld, 6.(Sturm)/JG 300, Löbnitz, Germany, December 1944

W. Nr. 681424, Oberstlt. H. - G. von Kornatzki, CO of II./JG 4, Welzow, Germany, September 1944

W. Nr. 682204, Lt. K. Bretschneider, 5./JG 300, Löbnitz, Germany, December 1944

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FINAL THOUGHTS

A WONDERFUL DISCOVERY...

"FROM THOSE MASSIVE ROCKET ENGINES THOUGH TO THE TINY HEAT-RESISTANT TILES THAT COVER ITS UNDERSIDES, IT IS A MASS OF INTRICATE PARTS THAT CAPTURE THE IMAGINATION LIKE NOTHING ELSE I'VE EVER SEEN"

Though I've never really had much of an interest in space flight, a recent trip to the the Udvar-Hazy Center in Chantilly, Virginia (near to Dulles International Airport), changed my mind and gave me a startling insight into the men and machines that took part in that groundbreaking endeavour.

Though I was there to see Enola Gay, the famous B-29 Superfortress that dropped the first atomic bomb over Japan, the sight of the Space Shuttle was a humbling experience. I've seen a huge number of aircraft over the years, but I can say with some certainty that nothing comes close to the sight of this incredible machine. It's huge of course, but it is more than just size that demands attention, its construction, detail and features really grabbing you as well. From those massive rocket engines though to the tiny heat-resistant tiles that cover its undersides, it is a mass of intricate parts that capture the imagination like nothing else I've ever seen. I loved it!

At some point I'd really like to build a Shuttle and see if I can go some way to capturing its appearance in miniature. In the meantime, I hope you enjoy seeing a couple of images of what will no doubt remain, the greatest aircraft ever to take flight.

A-10 THUNDERBOLT II

We provide you with plenty of full-sized reference shots for those keen to build this famous aircraft in miniature.

WRITTEN AND PHOTOGRAPHED BY SPENCER POLLARD.

Air shows especially the larger ones, are the perfect place to grab reference shots of our favourite aircraft. So when I had the chance to visit the Royal International Air Tattoo in 2015 and grab some shots of the A-10C, I took it!

Found in the huge static park, this wonderfully clean example allowed us to see, close-up, a great example of how this aircraft has been modified over the years and though still very much the same airframe that entered service during 1976 (the first aircraft being supplied to the 355th Tactical Training Wing at Davis Monthan AFB during that year) many small changes can be seen both in and on, this gleaming example.

So the star of this month's feature is another much later aircraft from Davis Monthan, this time from the 354th Fighter Squadron "Bulldogs". Resplendent in its attractive two-tone grey plumage, the aircraft is a fine example of how the Thunderbolt looks in the 21st Century and serves as a perfect reference should you wish to build the Italeri kit either from the box, or with additional details.

Form and function in perfect harmony - almost. The A-10 might not be the prettiest member of the flight line, but when the fists start to fly you'd want it to have your back…

ABOVE LEFT: The distinctive wingtips carry a number of important items, including navigation lights and the sensors for the AN/AAR-47 infrared missile warning system that tells the pilot that someone has taken a less that friendly shot at them and that they should take immediate action to avoid a possible impact. Underneath, but hidden from view are pallets that carry chaff and flares, another very important modern countermeasure. ABOVE CENTRE: Replacing the A-10's original Pave Penny pod, the 'Low Altitude Navigation and Targeting Infrared for Night' pod, or LANTIRN as it is more pithily known, is a veritable box of tricks that allows precise weapons delivery at night and in all weather conditions. ABOVE RIGHT: The underside of the aircraft is festooned with pylons that sprout at regular intervals to carry all manner of whizz-bangs and targeting pods over the battlefield. Utilitarian at best, their beautifully aerodynamic shape is spoiled by a generous sprinkling of rivets and those somewhat obvious sway-braces.

"So what does this button do?". Having its own set of steps comes in handy when a crew chief has to point out the finer details of a cockpit when the pilot has lost his bearings…

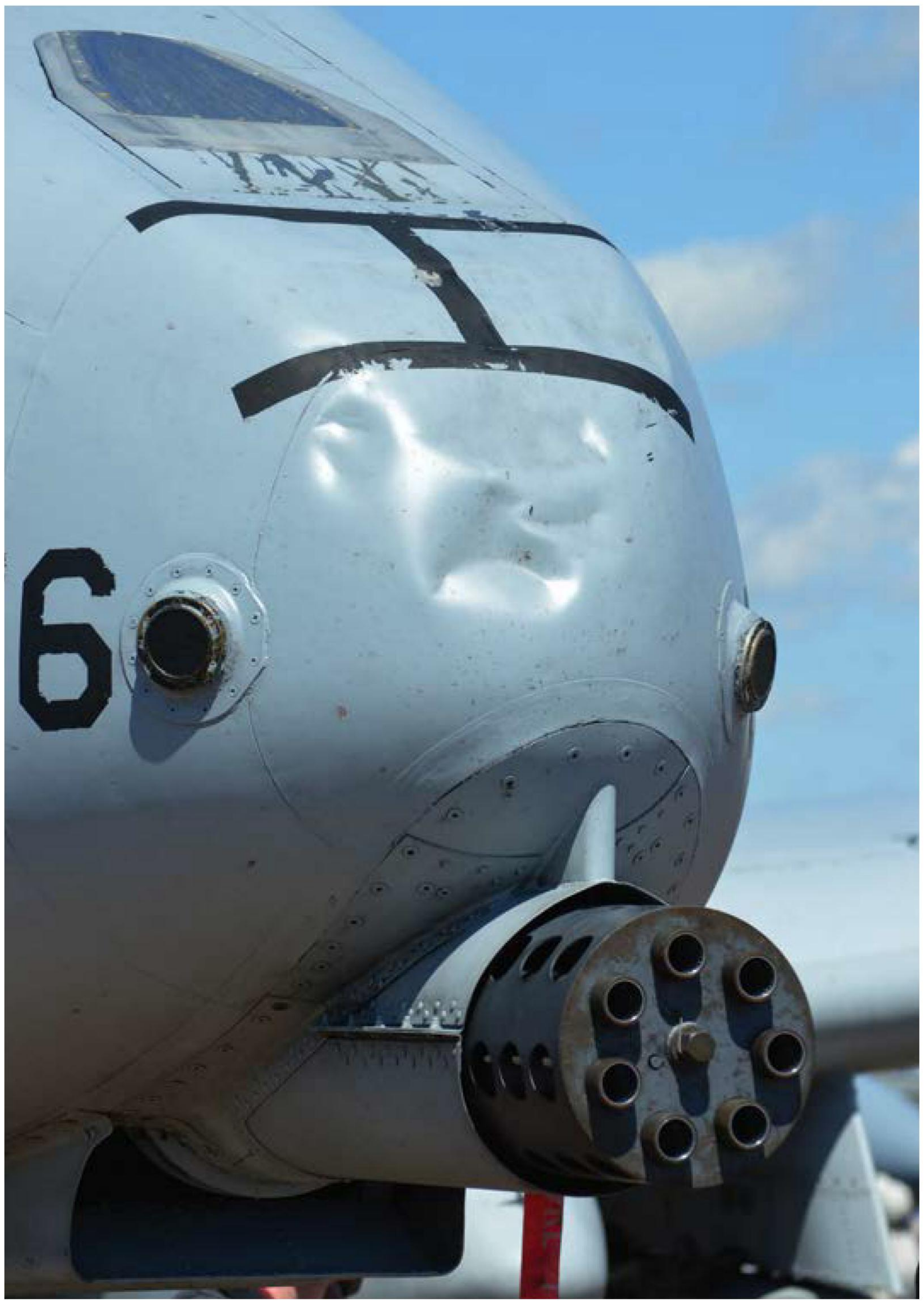
Though the A-10 is primarily known for carrying pig iron, both 'dumb' and 'guided', it can also tote missiles such as the AGM-65 Maverick should the need arise the pylon for which can be seen here.

The starboard undercarriage fairing is decorated with a black nosecone that acts as a cover for the aircraft's AN/APN-164 radar altimeter. A recent addition to later Thunderbolts, this clever piece of kit cleared up the deficiencies found with the original air-pressure altimeter found during operations at low level over the rain-soaked hills of Germany. The cap for the port fairing incidentally, covers the aircraft's refuelling point.

It would be impolite to suggest that the Warthog carries a little excess weight, but it certainly needs a solid set of legs to get it off the ground and then back down to earth, one of which can be seen here. Retracted, the wheel is only semi-recessed into the underwing fairings, almost half of it hanging out free and easy.

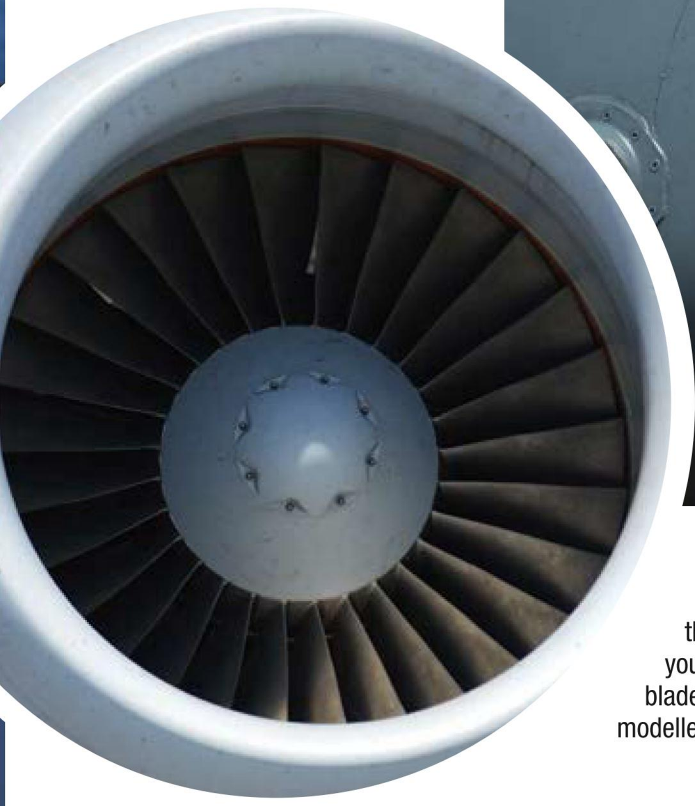
The nosegear leg is simple, utilitarian and more than up to the job of handling the weight of that massive gun that sits uncomfortably close to its upper mechanism. Note how the rear door is attached to the leg so it closes up as the leg retracts, rather than under its own steam.

The use of later more capable pods, made the A-10's Pave Penny redundant, so it was simply removed from the nose, a patch of pale grey paint and four retaining bolts in this instance, serving as a ghostly reminder of former glories…



The bug eyes of the Thunderbolt's now replaced AN/ALR-69A radar warning receivers lend a comical air to the look of the nose, but that gun is no laughing matter.

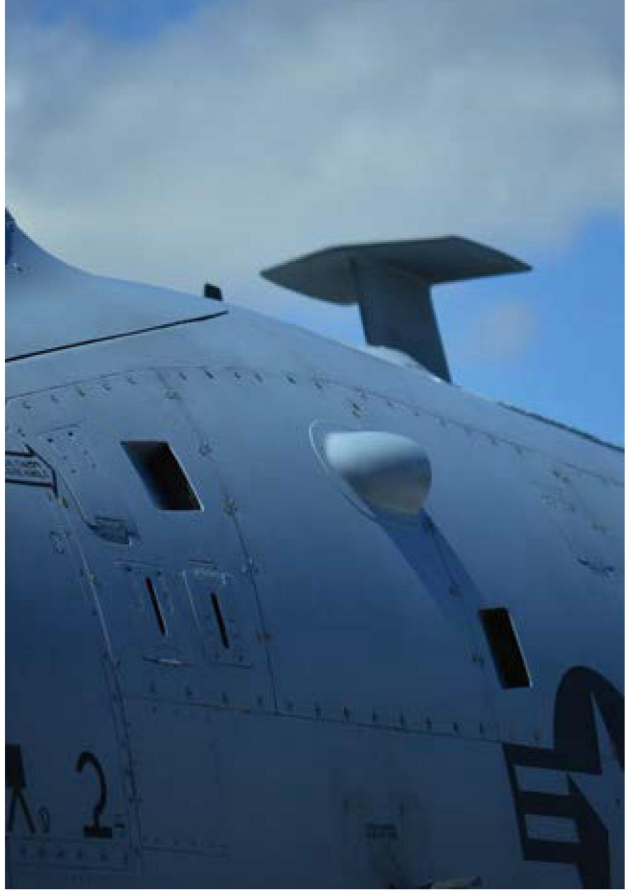
More likely the result of a bird-strike than a fender-bender with another aircraft, the crumpled nose of our machine adds to it's pugnacious look. Note the guides for the refuelling receptacle that help boom operators to hit the mark when tanks are running dry and pilots are running a sweat.



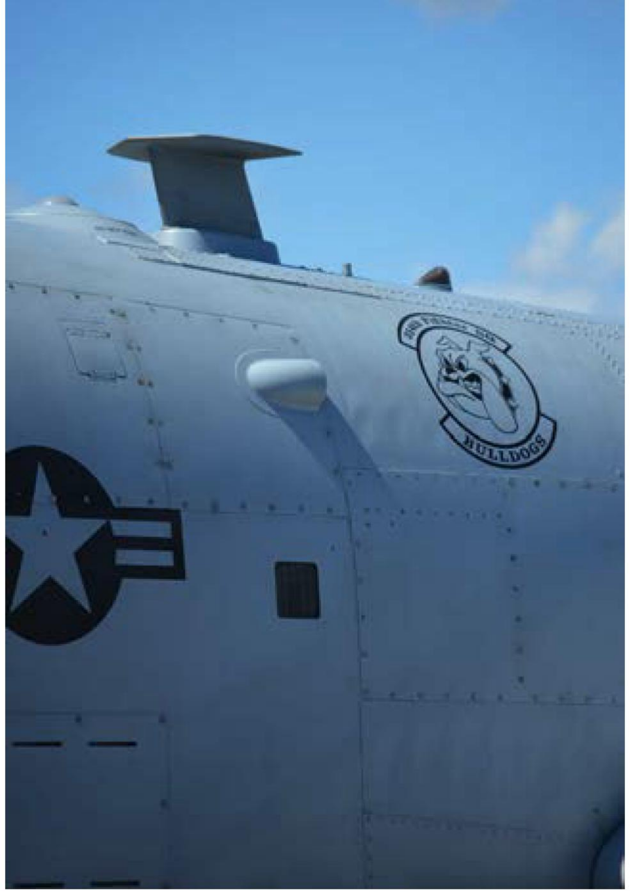
The intakes for the General Electric TF34-GE-1 00 turbofans show off for the camera. The fastidious amongst you may want to count the number of fan blades and compare that number with those modelled by Italeri…

Built for resilience rather than speed, Fairchild's designers paid no attention to such niceties as flush rivets and smooth panels, much of the aircraft being plagued by raised features that would not have looked out of place on an early plastic kit.

An aircraft built around a gun, the nose of the A-10 is dominated by the muzzle of the General Electric GAU-8/A Avenger 30 mm that allows the pilot to spit fire and brimstone at a rate of 3,900 rounds per minute, one and two-second bursts being on offer to keep the gun from overheating and ammunition in reserve.



Giving the pilot a much needed boost in his ability to talk to the outside world, this new blade antennae allows the use of satellite communications within the cockpit. Found behind the A-10C's GPS hump, this BLOS SATCOM antenna started to appear post 2006.



In this era of drab, grey aircraft, there is little chance for flamboyance when it comes to markings. At least we can see some squadron badges in place, 354th Fighter Squadron's badge appearing here, black and colourless.

Though unashamedly designed to rain hell on anyone unlucky enough to be under the aircraft in times of war, later variants of the A-10 can also look after themselves air-to-air thanks to the use of AIM-9 Sidewinders, one of which is seen here fixed to a dual mount under the port wing of our featured aircraft.

Seemingly a throwback to WWII-era bomber design, the A-10's twin-tailed setup is actually a clever design that helps to provide a level of protection for the two engine pods, both in terms of weapon strikes from AA fire and also in reducing their heat signature from more inquisitive infra-red systems.

A further splash of colour is offered by the squadron flash on the inside of the tails. It's hardly garish, but it is a start…

Air forces around the world like to label their aircraft with all manner of curious descriptions and badges, the USAF being no different. Here we can see the "Bulldog's" blue and yellow flash, the SAC badge and then some text and numbers: 'DM' for Davis-Monthan AFB: 'AF' for Air Force; '81' for the year of manufacture and '956', the aircraft's serial number.

Simple and functional the jet pipe for the TF34 engine pokes out from the externally mounted nacelle.

Needs must when it comes to scabbing on self-protection systems, even if it does rather spoil what little there is of aerodynamic finesse around an airframe. Here, part of the Thunderbolt's AN/AAR-47 missile warning system can be seen between the original 'eyes' of the AN/ALR-69 on the aircraft's tailboom.

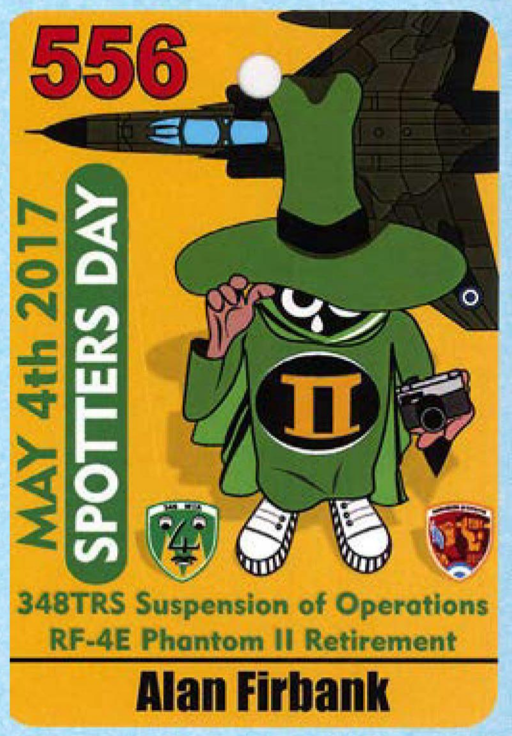
Much like an airliner, the use of externally mounted engines offered the A-10 a reassuring level of redundancy should something go wrong internally, or if one finds itself shot off the aircraft through enemy action, one being enough to at least get you back down to earth…perhaps.

Modern aircraft kits tend to offer wonderfully incised panel lines to tantalise the modeller, but in the case of the A-10 and some of its less than smooth surfaces, they would be wholly inappropriate…

The huge actuators for the rudders dominate the lower flanks of the twin tails, adding a rather agricultural look to proceedings, as do the navigation antenna fairings and of course, those delightfully obvious rivets!

A final view of our picture-perfect aircraft. Note the use of two baggage pods under the wings. Crews often need to carry their worldly goods around the globe, these old converted napalm tanks, offering not only the perfect receptacle for all manner of bits and pieces, but also a fine canvas for some bright squadron heraldry.

Those who love to weather models need look no further than the Greek Air Force whose motto seems to be fly 'em, not clean 'em. This RF-4E is a great example.



WRITTEN AND PHOTOGRAPHED BY ALAN FIRBANK

THE HELLENIC RF-4E PHANTOM PHINALE

On the 4th and 5th May, the Hellenic Air Force organised an event around the retirement of their last handful of RF-4E Phantoms. The Thursday was a 'Spotter's Day', basically a rehearsal for the official ceremony to be held on Friday. The formations, etc. had to be practiced so the 348th TRS grabbed an opportunity to show off their aircraft one last time. The five hundred or so places available were soon snapped-up. I was pleased to be amongst those to have a ticket for the Greek Air Force base at Larissa, about a four-hour drive north from Athens.

While in the country, the opportunity to also visit the Hellenic Air Force's Museum at Dekelia-Tatoi was not to be missed. The museum is situated on an active base on the northern edge of Athens. Entry is free but you need to have your passport with you when you sign-in at the main gate. A minibus then ferries visitors to the museum area and back again.

The museum is well worth a visit. One area at the back of the facility is no more than a junkyard but with some interesting items. A restoration hangar was not open but we were told of a ▶

Many of the HAF's F-16s carry conformal fuel tanks all the time. This example would take part in the final flypasts.

One of the last three RF-4Es rolls-out after landing at Larissa.

The 348th TRS's special from a couple of years ago. The unit would regularly decorate one of its Phantoms in special markings.

An HAF F-16C arrives for the Phantom's retirement ceremonies.

Spitfire, Stuka and Ju 52 inside that were being worked on. An open-air part of the museum was the home of a selection of types including a pair of A-7Hs familiar to RIAT visitors and a pair of Starfighters with special schemes that have popped out of Hasegawa boxes in the past. The exhibits in this area were in various states of being weather-beaten. There was a line of recent types on the opposite side of the main hangar in very good order and then a hangar full of pristine exhibits. These were mainly jets having served with the HAF with an odd pair from the Korean War – a F-86 Sabre and MiG 15.

The Spotter's Day flying was all about the last three RF-4Es left flying. The three were flown several times and taxied past us on a taxiway a few yards away. The weather was perfect that day as it was the following day. As well as the Phantoms, the final formation flypasts included a Mirage 2000 and an F-16C. Many of the base personnel appeared on Friday morning in their smart uniforms for the formal ceremonies marking the end of Photo Phantom operations.

We bring you some photos from the day and then from the museum. If you are visiting Greece and fancy a bit of freelance aircraft spotting near bases, you are advised to think of something else to do with your time. The Greeks are still very sensitive about anyone looking too closely at their military installations and do not hesitate to make arrests.

Thanks to our HAF hosts for a great couple of days. All that way to see three Phantoms? I would do it again tomorrow.

One of the final Phantoms looking much cleaner on top than it does underneath. The scheme is the old USAF SEA Asia camouflage pattern of two greens and tan on the upper surfaces and light grey undersides.

Under all of those special markings, this RF-4E is still in its old Luftwaffe camouflage scheme.

The finale scheme showing the clever camera shutter iris artwork on the lower fuselage

Giving the RF-4Es a great send-off with this final special paint job.

The HAF Mirage 2000 turns to make its slot in the final formation.

The Greek Texan II makes a low departure to rehearse his solo display for Friday's ceremony.

A very rare opportunity to be up close with a Phantom was worth the long trip to Greece. This Phantom's crew must have been very warm as they slowly pass during their photo call.

A thing of beauty. The mighty Phantom bows-out of service with one more air force.

The great design of the RF-4E's final scheme is a fitting tribute to their years of service.

HAF's well preserved Sikorsky Chickasaw in the museum.

The last three RF-4Es perform a flypast for the dignitaries on the Friday with a Mirage 2000 and F-16.

A-7H Corsair II now in the museum has been a visitor to RIAT at Fairford in the past.

Star of Fairford and a Hasegawa kit box, this A-7H is beginning to look the worse for being out in the weather for a couple of years.

The Mount Olympus F-104 looking past its best in the Greek sunshine.

A Cessna T-37, one of a pair parked in the museum.

A HAF F-86 Sabre in display markings.

A rare TF-102A Delta Dagger looking well cared-for in the HAF Museum.

A Mirage F-1C in reasonable condition completes the row of aircraft in outside storage in good condition.

A well-preserved HAF F-5E in the Greek Air Force Museum.

An RF-84F Thunderflash as part of the excellent collection in the museum's hangar.

F-84 Thunderjet was a popular post war jet with several European Air Forces. This example is preserved in the HAF Museum.

An F-86D Sabre in the HAF Museum in pristine condition.

This was a strange, out of place pair of exhibits in the HAF Museum; the Korean War F-86 Sabre and MiG 15.

The huge Helldiver was a surprise exhibit in the museum. I did not realise that this big, US Navy aircraft was operated by the Greeks.

The varied collection of airframes in one area of the HAF Museum.

In order to house the FA.2's Blue Vixen radar, the sleek lines of the Sea Harrier FRS.1 were somewhat compromised with this bulbous beak. Looks aren't everything though, the new radar and AMRAAM missile fit, making the FA.2 one of the best interceptors on the planet before its retirement in 2006.

WRITTEN AND PHOTOGRAPHED BY SPENCER POLLARD

HARRIER HEAVEN

Full-sized inspiration for those keen to model this aircraft in miniature

The annual air show at RAF Cosford in Shropshire, is one of the few chances people in the UK get to see not only aircraft in service throughout the flying display, but also how the base operates and then see many of the hidden treasures that lurk behind the steel doors of its hangers. Having decided to brave the weather at the beginning of June (unlike today which is experiencing temperatures well in excess of 30 degrees, airshow day was chilly and damp…), we set off on the very short trip to the base to see what we could find, this particular scribe being keen to see the ►

The "Vectored-thrust Aircraft Advanced Control" (VAAC) Harrier (registration XW175) is unique as a military aircraft as it spent all of its working life at RAE Bedford and Boscombe Down as an experimental aircraft in support of innovative STOVL research programmes. One of the aircraft's most notable roles was flying for QinetiQ and being used to develop Flight Control Systems for the new F-35B Lightning II, using an array of advanced sensors and computer equipment. The aircraft arrived at RAF Cosford in 2015 after a lengthy period of storage at Boscombe Down. (Via Cosford Air Show)

Arguments still rage over the aesthetics of Hawker Siddeley's elongated jump-jet, but I think it makes the aircraft look more elegant. Of course it does no harm that it's finished in the most beautiful scheme ever applied to a Harrier, its red, white and blue plumage accentuating the T.4's flowing lines, to perfection.

The Ferranti Type 106 Laser Ranger and Marked Target Seeker (LRMTS) dominates the nose of the GR.3, giving it not only a more purposeful look, but a greater chance of getting pig-iron on a target in all weathers, day and night.

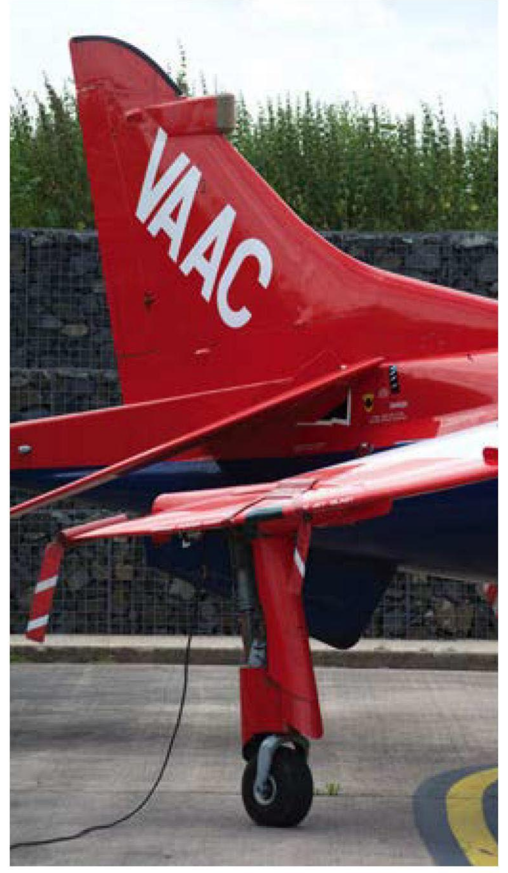
If ever a weapon defined an aircraft's role, it's the Harrier's Matra Type 155 rocket launcher. Widely produced, this was a reusable device manufactured completely from metal with a fluted nose cone through which the RPs were fired. Loaded with 18 SNEB 68mm rockets, it can be pre-programmed on the ground to fire in shots or in one single ripple salvo. (Wikipedia)

Harriers than had been advertised as part of the static display in the run-up to the show. I was not disappointed by what I found!

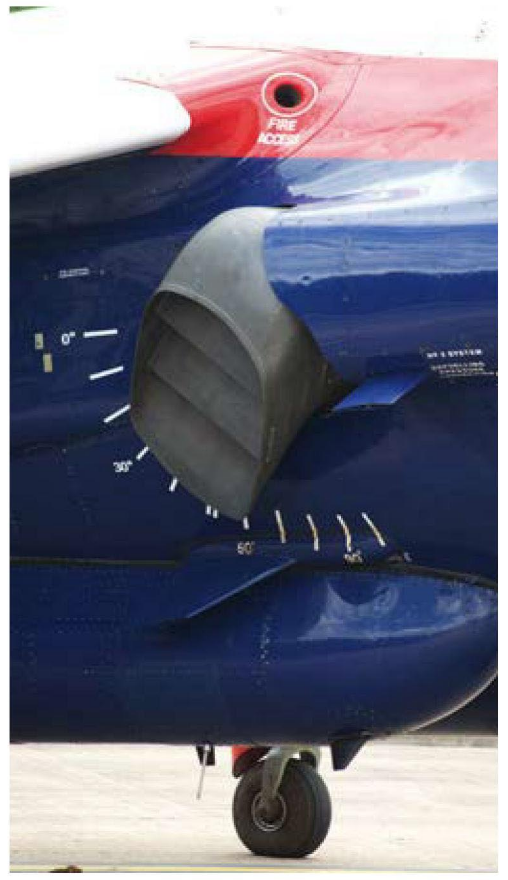
The museum at Cosford is home to a number of displayed Harriers, a GR.9 (ZG499, No.1 Squadron RAF) and a Kestrel FGA.1 (XS695) and the three that are not in the museum, a Sea Harrier FA.2 (ZH796), a two-seat T.4 VAAC (Vectored-thrust Aircraft Advanced Control) and a GR.3 (XZ991), now finished in a temporary arctic scheme over its normal Dark Green, Dark Sea grey plumage.

As a Harrier fan, it was great to not only see so many different variants in one place, but also to see how well preserved these incredible machines are. Many have been kept inside the hangers belonging to the Defence School of Aeronautical Engineering (DSAE) and so are in almost perfect condition, being complete and as they would have appeared in service. It's always great to see Harriers no matter what their condition, but it is doubly thrilling to be able to examine these machines in this way and though I couldn't get that close to the VAAC, still looking magnificent in the welcome sunshine that peeked out through the rain clouds that plagued the event!

Over the next few pages I hope you will be happy to allow a little self-indulgence so that I can show you the three that aren't usually on display, but appeared to delight the enthusiasts during the June show. I hope you enjoy seeing them here as much as I did whilst dodging the showers over Shropshire! ■



The finish on this aircraft really is stunning, the guys and girls in the paintshop having outdone themselves as the wonderfully glossy overcoat was applied. The tail's RWR helps identify this aircraft as a T.4, the large 'VAAC' logo leaving no one in any doubt as to its true purpose and designation.



Sneaky electronic housings under the belly of the jet replace the strakes and gun pods that would normally live under there. Note the metal jet exhaust and how its flat finish contrasts with the gloss paintwork.

Under charcoal grey summer skies, Cosford's Harrier GR.3 looks right at home in its temporary winter camouflage. Cosford's aircraft currently wears a 1 Squadron badge on its nose, a perfect reminder of the Harrier's service with this famous unit. In stark contrast to the instructions contained in most kits, this aircraft seems to be a random collection of mismatched parts, the grey undercarriage leg being in stark contrast to the white wheel hub and door interiors…

Arguably the most capable of all Harrier variants, the Sea Harrier FA.2 strikes a pose in the late afternoon sun.

A defining feature of the FA.2 are the pylons under the fuselage, from which can hang AMRAAM missiles. Note in this shot the soft covers for the aircraft's auxiliary intake doors, a simple addition for those not keen to open those up on models that don't feature such delicate details…

Having added the nosecone from the Blue Vixen radar, the designers of the FA.2 needed a place to fit the pitot tube. What better place to put it that on the leading edge of the aircraft's fin?

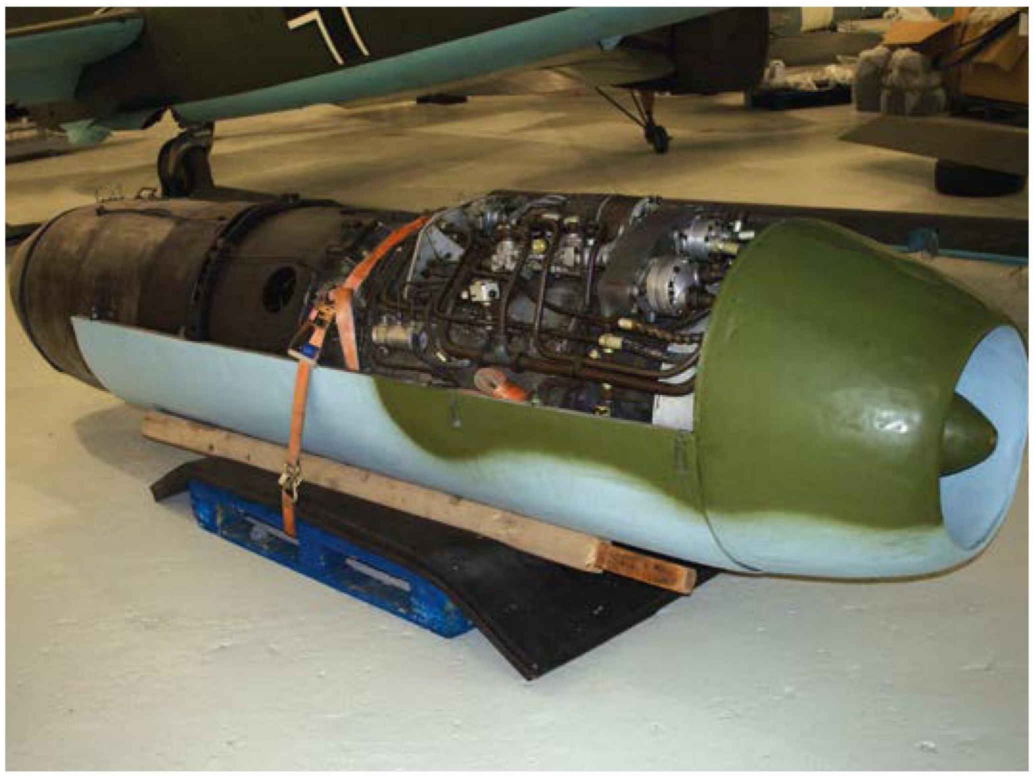
WRITTEN AND PHOTOGRAPHED BY SPENCER POLLARD

THE STORMBIRD RETURNS

After a period on display in London, Cosford's stunning Me262 returns home and we were there to see it prior to final assembly...

Even today, the 262 is a stunning design that belies its age. Openings for the Mauser cannons, give an indication of just how deadly this aircraft was when in full swing over the battlefields of Northern Europe.

Though still in pieces, it is good to have the incredible Messerschmitt Me262 back on display at the RAF Museum Cosford.



Because the aircraft has yet to be be put back together, it is easy to see the details, especially the engines which are fully visible inside their open nacelles.

Compared to many of the engines on display at Cosford, the Jumos that power the 262 look tiny, simple and from a distinctly different era. Don't let looks fool you though; without these engines in this machine, the work of jet aviation may not be what it is today.

The tarnished jet pipe reveals little of its metal construction, the finish being dull and heavily weathered.

Kit engines tend to be oversimplified, the surface of the real thing revealing subtle lightening holes and openings through which you can see the inner workings of this classic powerplant.

Much like the Revell '262 that I'm currently building for a future issue of this magazine, the real aircraft was broken down into a fuselage and full-span wings connected by a large central spar, that enclosed the wheel bays. Disassembled, this part of the aircraft reveals its secrets.

It really is a treat to see an aircraft broken down like this, the internal structure and smaller features that are normally invisible, being there for all to see.

Warhawk
by Romain Hugault
1/32
eduArt
OOPS! IT SLIPPED!
Hasegawa Plastic parts for P-40N-1, 5, 20 (Kitty Hawk IV)
A2 size fine print „Warhawk“ by Romain Hugault
Cartograf-printed decals for 5 markings
Eduard photo-etched details and painting mask
Brassin: wheels and exhaust stacks
Limited edition of 3000 pcs
Vintage style metal wall sign with „Warhawk“ artwork
400 x 282 mm
#11104 www.eduard.com

FINAL THOUGHTS

MENG'S F-35A AND THE CASE OF THE RAISED RAM PANELS...

Good to see the appearance of this new kit from MENG. Question though: why do model companies keep creating miniatures of this aircraft with raised RAM panels? The real thing is as smooth as a bar of soap, so why don't designers simply offer the panels as decals and then engrave the most important panels over which they sit? Hasegawa, Italeri and now MENG have all replicated these smooth surface features as raised panels that look completely inaccurate and do nothing to replicate how the real aircraft looks. Why, when all other models feature delicate engraved panel lines and smooth finishes - including those that shouldn't, such as helicopters - do companies insist on this error on an aircraft that is very its very nature, smooth as silk? Answers on a postcard to...

See you next time. ■

> *"Why do companies insist on this error on an aircraft that is very its very nature, smooth as silk?"*

EDITORIAL

IN THIS ISSUE…

Written by Spencer Pollard

Hello everyone, welcome to the September 2017 edition of your favourite aviation modelling magazine!

This month's MAI is another action-packed edition with some very fine models for you to enjoy!

The core feature this month is a detailed look at the Su-17 Fitter, both in miniature and in detail. The Kittyhawk kit is perhaps the most maligned model released in the last few years, many commentators taking time to tell the world about it, issues that they have found and how challenging the kit is to build. That being so, we sourced a kit from our friends at Antics and decided to build one for MAI, deal with some of the points revealed Online and then see how well the kit went together. The project was most certainly challenging, but far from difficult and the resulting model is incredibly striking. Along with our build, we also have a historical feature to enjoy and a walk-round of the real aircraft should you wish to add additional detail. This hugely in-depth feature begins on page 22.

Along with our review build of the Su-17, we also have a detailed appraisal of the very new Great Wall Hobby F-15E Strike Eagle. Though a smaller scale than their previously released 1:48 F-15 family, this new kit is no less detailed, the parts supplied combining to create a stunning replica of this beautiful aircraft. Drewe Manton takes the reins of this feature, his thoughts on this brand new kit beginning on page 46.

Our third review this month looks at the very impressive Revell 1:144 Boeing 777. Big and beautiful, the 'Triple Seven' is a model that's small in scale, but large in size and in combination with the delightful Qatar Airlines colours in which Huw Morgan's model is finished, a commanding presence in the display case. Huw's feature begins on page 38.

And finally…

We all like a simple, cheap kit now and then, so when Nick Shuttleworth offered to build the classic Tamiya 1:48 Brewster Buffalo, I couldn't really resist seeing it in MAI. Simple to build, fun to paint and attractive once complete, Tamiya's classic kit is a perfect weekend project and we hope that you enjoy seeing Nick's feature as much as he enjoyed putting it together. The fun starts on page 58…

So this is the August edition of Model Airplane International. I hope you enjoy this issue and I hope to see you again next month! ■

WRITTEN BY GLENN SANDS

FIT FOR THE FIGHT

MAI EXAMINES THE DEVELOPMENT OF SUKHOI'S SWING-WING WARRIOR, THE SU-17/20/22 FITTER, AND DESCRIBES THE MULTITUDE OF SUB-VARIANTS THAT WERE DEVELOPED AND EXPORTED SINCE THE SEVENTIES.

Western analysts in 1967 got their first glimpse of a swing-winged variant of the already documented Sukhoi Su-7 Fitter in July 1967. At the time, the West designated the aircraft as the Su-7IG and thought the new aircraft as little more than a quaint 'one-off' experimental machine with little operational potential. But, later US reports explained that by the 1970s this initial assessment may have been a mistake, and concern reached epic proportions when it was reported that a squadron of these new Russian 'swing-wing' fighters were based in large number close to China's border in 1971.

In fact, this rumour turned out to be true, as the same year saw deliveries of the new fighter to regiments of the Soviet Frontal Aviation (tactical air force). Western analysts were quick to redefine their assessment of the new aircraft which they designated, Fitter-C. The new model was able to carry twice the war load, operate from airstrips only half as long and strike targets 30 per cent further away. All these new advances looked as though they had simply been accomplished by adding pivoting outer wings and a new engine to the original Su-7 Fitter! This early confusion in the West and the multitude of sub-variants and three designations Su-17, Su-20 and Su-22 that the Fitter has when exported to Soviet client states back in the day, often overshadowed the aircraft's popularity. Given that it bucked the aeronautical design trends at the time of sharper and sleeker the Fitter looks as though it was designed in the Sixties, but remarkably it still remains in operational service, albeit in far fewer numbers, in Europe and a with small number of overseas nations.

NATO Confused…

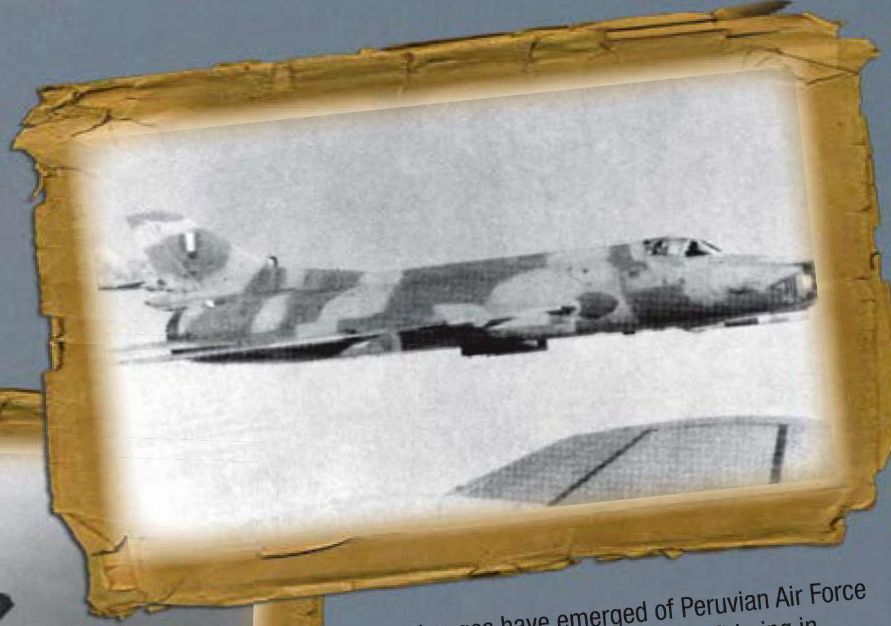
The Fitter-C the original swing-version, is still in limited service and looks very much like the original Fitter-B prototype expect for having a dorsal spine joining the canopy to the fin. What is less obvious is the Lyul'ka afterburning turbojet of the main production version is the Lyul'ka AL-21F-3, even more powerful than the AL-7F-1 that was fitted to the to the original fixed-wing Fitter-A and to the earliest batch of swing-wing machines. These Lyul'ka afterburning turbojets were some of the most powerful engines in combat service anywhere in the world at the time, but left a visible smoky trail at high power settings. The higher-rated engine made a major difference to the all-round performance, acceleration and combat manoeuvrability of these large and increasing heavy aircraft.

In contrast to the emerging swing-wing fighters in the West which had an on-board computer called a Mach/sweep programmer, which automatically adjusted the wing sweep to the best value for each flight condition. On the Fitter, the pilot adjusted the wings manually, with a cockpit lever. The outer panels pivot through sweep angles from 28 degrees for take-off and low-speed flight to a maximum of 62 degrees for supersonic flight and low-level attack at full throttle. In contrast to other fighters of the similar type in the West where the aircrew can set the wings to any angle, the Fitter pilot has a choice of only two set limits plus one intermediate position.

On the leading edge of each pivoted panel

Details of the underside of a Polish Su-22M-4 Fitter-K.

How it all was during the Cold War, a Su-17M comes into land at an airfield in East Germany. Of note in this view are the open airbrakes on the rear fuselage.



Few images have emerged of Peruvian Air Force Su-22 Fitter-Fs despite the aircraft being in service since the mid-Seventies. The aircraft wear a two-tone sand and brown camouflage over light blue undersides.

The Polish Air Force often brought their Fitters to the Royal International Air Tattoo, often they arrived with some sort of flamboyant nose art, as seen here on 'Red 9102' in 2014.

Wearing the standard camouflage scheme of a Polish Air Force Su-22M-4, Fitter-K is 'Red 3612', since 1994, the fleet has undergone a modest upgrade and the Su-22s have emerged in a new two-tone grey camouflage scheme.

Another view of the Fitters at RIAT 2014, this view shows the multitude of details on the airframe. The aircraft aren't certainly 'clean' with a host of ECM systems scabbed on to the fuselage.

This Soviet Air Force Su-17M-4 wore an unusual light brown and green camouflage when photographed in August 1991.

With both front and rear canopy closed, this Su-33M-3 is shown between sorties at Taszar in August 1991. These Hungarian Fitters show the differences in camouflage schemes between the two aircraft.

Heavily weathered and in need of a re-paint, the Hungarian Air Force was the only Warsaw Pact Fitter operator to receive the export version of the Soviets' Su-17M-3 Fitter-H rather than the ultimate M-3 Fitter-K.

is a large slat, which is opened to increase lift at low speeds. On the trailing edge are – outboard – a powered aileron, used for roll control at all times and – inboard – a large slotted flap. When the wings are fully spread these flaps can be extended to give extra lift and drag, but as soon as the wing begins to pivot back the flap circuit is rendered inoperative and the flaps begin to disappear into the large box-like centre section. Should the pilot be unable to unsweep the wings they were advised to eject.

Into Service

The very first Fitter-Cs were equipped with the basic Sirena RWR aerial in the tip of the fin, but in production aircraft this crucial defence system was moved to a position just above the big tube housing the braking parachute. Another additional to help the Fitter survive in hostile airspace was a rear-view mirror in the top of the canopy, which instead of sliding to the rear, as on the Su-7 Fitter-A, is hinged upwards from the rear in a clamshell fashion.

In order to improve the airflow across the wing an additional fence was added to the fixed inner wing, while an outboard fence, at the pivot, was made extra deep and faired at the bottom edge into a stores pylon. This arrangement provided the Fitter-C with a total

Polish Air Force Fitter camouflage varied greatly between the airframes with this two-seat Su-22UM-3 have been recently repainted in a predominately green and brown camouflage. Note the blind-flying curtain retained on the forward canopy.

The two positions of the wing-sweep are demonstrated in this pairs flypast during the Royal International Air Tattoo. Of note is the heavy weathering to the undersides of the Polish aircraft.

of eight stores pylons, two tandem pairs under the fuselage, two under the inboard leading edge and two under the giant outboard fences. The fuselage and outer-wing pylons were plumbed for standard Sukhoi 800-litre drop tanks. The heavy NR-30 cannons were retained in the wing roots.

The Fitter-C was widely exported, usually with a reduced standard of avionics. For example, the latest electronic warfare suites at the time were not fitted even to aircraft destined for Warsaw Pact air forces, and many were to operate alongside Soviet models at combined bases.

By 1975, Soviet production lines had switched to the Fitter-D, which introduced a new forward fuselage, lengthened but tilted slightly downwards to improve the view for the pilot. Under the nose is a long shallow chin fairing housing a terrain-avoidance radar, which assists the pilot in flying over hostile territory at the lowest possible height whilst still keeping a safe distance from the ground of other obstacles. Another upgrade added to the new variants was a laser rangefinder and marked-target seeker. Mounted in the lower part of the inlet nosecone, this looks out diagonally downwards through a window in the underside of the cone. It gives the weapon-aiming subsystem precise measurement of target range, and automatically detects ground targets marked by friendly lasers, such as would be aimed by Soviet special forces, who would have deployed into West Germany to target NATO facilities.

Making it Work…But How?

One of the unusual characteristics of the Fitter family is what affect the unbalancing of the longer and ▶

The minor colour details are shown on this view of 'Red 3612' during a low-speed pass. Note how the lower sections of the pylons are silver/grey and the leading edge of the tail fin has a replacement bright green panel.

FITTER VARIANTS EXPLAINED

Su-17M/Su-20 'Fitter-C'

The first series production aircraft was the Su-17M in 1971. Nine pylons, with the forward fuselage and outboard wing pylons capable of carrying drop tanks. The export version of the Su-17M was the Su-20, first flown in 1972 and delivered to Poland, Egypt, Syria and Iraq.

Su-17R/Su-20R 'Fitter-C'

The Su-17R and its Su-20R export equivalent incorporated additional wiring and plumbing for a choice of three Sukhoi-designed KKR multisensory reconnaissance pods on the centreline. Later, examples of the Su-22 were also modified to carry the KKR recce packages under the designation Su-22R. Other tactical reconnaissance versions were the Su-17M-3R and Su-17M-4R. These were exported as the Su-22M-3R and Su-22M-4R respectively. The Su-17M-3R was modified to carry the centreline KKR pod during production, the Su-17M-4R was so equipped from the beginning of its production run.

Su-17M-2 'Fitter-D' and Su-22 'Fitter-F'

First flown in 1973, the Su-17M-2 was developed in order to improve ordnance delivery with the introduction of the Fon laser rangefinder and other equipment, including a distinctive under nose Doppler fairing. Production took place between 1975-77 and the export versions was the Su-22 with the R-29BS engine. A downgraded variant delivered to Angola and Libya was produced between 1976 and 1980.

Su-17UM 'Fitter-E' and Su-22U 'Fitter-G'

With a redesigned forward fuselage and cockpit in order to improve pilot view, the Su-17UM two-seat combat trainer was the first of the 'second generation' Su-17s. The Su-17UM and its export equivalent the Su-22U were produced between 1976-1981.

Su-17M-3 'Fitter-H' and Su-22M 'Fitter-J'

Developed in conjunction and built in parallel with the Su-17UM, the Su-17M-3 was a new fighter-bomber version. The forward cockpit structure was from the Su-17UM, with the instructor's position used to house additional fuel. An updated weapons system introduced the Klyen-PS laser targeting system. The export version was the R-29BS powered Su-22M built between 1979-1981.

Su-17UM-3 'Fitter-G' and Su-22UM-3 'Fitter-G'

The Su-17UM-3 unified Soviet pilot training by bringing the basic Su-17UM combat trainer to the Su-17M-3 standard. The Su-17UM-3 was produced from 1978, with the equipment of the Su-17M-3. All Su-17UMs were eventually upgraded to the Su-17UM-3 standard during later 1979 and early 1980. The export version of the Su-17UM-3 is the Su-11UM-3. But, from mid-1983 all export versions were fitted with AL-21F3 turbojets, resulting in the Su-22UM-3K.

Su-17M-4 'Fitter-K' and Su-22M-4 'Fitter-K'

The ultimate single-seat variant, the Su-17M-4, and its export equivalent the Su-22M-4 entered service in 1980 with limited numbers still in service today. (For additional details see main text).

Carrying a single practice bomb on its inner pylon a Polish Air Force Fitter-K taxies out for a training sortie. When operating locally drop-tanks were never usually fitted to save stresses on what was becoming an old airframe.

A Czech Air Force Su-22M-3 Fitter-J 'Yellow 4009' taxies back to its hardstand after an overseas deployment. Note the drop tanks are painted sand and blue and don't match the camouflage scheme.

Late in their service Polish Fitters started wearing nose-art, and as a member of NATO flew a number of joint exercises with former adversaries, such as Luftwaffe F-4Fs and Tornados.

Devoid of external stores the surprisingly elegant lines of the Su-22UM-3 become apparent as o this Czech Air Force example.

deeper nose had on the airframe which was not countered by increasing the fin. But for export versions of the Fitter-F the large tail was fitted.

This was also one of the first variants to have an entirely different and improved engine, the Tumanskii R-29B. This smokeless engine is the same as fitted to the MiG-23BN/MiG-27 Flogger ground-attack versions. It is smaller than the Lyul'ka engines and needs fewer cooling air inlets in the rear fuselage. The final variants of the Su-22s were all fitted with the R-29B.

Trainers and Beyond

The Fitter-E which was a two-seat version of the Fitter-C, retained the strong steel fuselage panels adjacent to the gun muzzles, but in fact had the left gun removed. As did the Fitter-G, but this was effectively a totally new family with a redesigned fuselage and vertical tail. Powered by the Turmanskii engine, the Fitter-G has a down-tilted forward fuselage of significantly greater depth and when this is combined with the deeper dorsal fairing it is easy to see why the fin had to be made taller, and new ventral fin added. The Fitter-G cockpits are stepped as in other modern tandem-seaters, and the two upward-hinged canopies are entirely new.

In 1982, the Fitter-H, a single-seat version of the Fitter-G with the new deeper fuselage and dorsal fairing, tall fin and revised canopy was observed by NATO analysts. This model retained both wing-root cannons and laser a nose mounted laser, but had terrain-avoidance radar mounted internally in a deeper nose. The Fitter-H was capable of carrying the new generation of smart missiles such as the AS-7 Kerry. Despite the upgrades, Libya was the only export customer for this variant, but overseas client states at the time purchased a slightly modified Fitter-J, the only external change being the addition of a ventral fin, which improved stability at low-altitude.

Killer 'K'

The final version of the Fitter was the 'K' and which became the definitive single-seat Su-22. The Fitter-K carries an integrated navigation and weapons system, reducing the pilot workload, and enhancing tactical capability. This avionics suite includes a sighting system consisting of a computer, laser rangefinder, radar and TV display. While improving the capabilities of the new variant, the system also causes some reduction in fuel capacity, since the new avionics occupy space behind the cockpit that was previously used for fuel. Additional changes to the airframe were a RWR aerial in front of the dorsal fin, which has a lower drag than the previous RWR projecting from the wing leading edge. The Two sub-variants of the Fitter-K, the Su-22M-4 and Su-22M-3 can be differentiated by virtue of a new intake in the dorsal fairing on the former. Production began in 1980 and the aircraft where upgraded in 1987 following Soviet experience in Afghanistan. Both variants were produced throughout 1984 at a staggering rate in order to satisfy the demand for exports orders to client states, and were powered by the AL-21F-3. But, at the same time Sukhoi was also producing later generation aircraft such as the Su-24 Fencer, Su-25 Frogfoot and Su-27 Flanker. Unable to sustain production on all four aircraft the Fitter was slowly becoming outdated, despite ongoing upgrades. Production lines finally ceased building Fitters in the mid-1980s, leaving a small facility open for overhauling the aircraft when necessary.

Operational Peak and Operators

Fitters earned their reputation as a tough, capable ground attack platform in Afghanistan with the Soviet air force and Afghan Army Air Force Fitter-Fs, Js and Ks were based at Shindand air base. At their peak around 42 examples were in theatre conducting daily strikes against anti-government militia groups.

The Azerbaijan air force flew four Su-17Ms, acquired after the break-up of the USSR. These served with the air force's sole Bomber Aviation Regiment although serviceability issues soon grounded the fleet. Other Soviet states which operated the Su-17M were Turkmenistan (Su-17M-4s and Su-17UM-3s), Ukraine (Su-17M-4R/Su-17UM-3s for reconnaissance) and Uzbekistan (Su-17M-3s and Su-17UM-3s). Bulgaria's 18 Su-22M-4s and three Su-22UM-3s were delivered in 1984 and had the additional tasking of reconnaissance duties added to their mission requirements.

Despite the arrival of more modern types, Egypt retained its Su-22s in service. Egyptian Su-22M Fitter-Js were overhauled in Eastern Europe. Throughout their service the state of

For many aviation enthusiasts, the Polish Air Force Fitters were the highlight of the 2014 RIAT, their flying display didn't disappoint, with a pairs formation followed by a number of solo high and low speed passes.

With its wings swept fully forwards and trailing-edge flaps and leading-edge slats extended, a 20th Fighter Bomber Regiment Su-17M-4 is on finals to Templin airfield in August 1992.

Moments from touch down a Czech Air Force Fitter-J illustrates the heavy-duty undercarriage of the Su-22. Although not intended to operate from unprepared strips, if necessary, during wartime Su-22s could but, only for short periods while their main runway was being prepared.

At the height of Polish Air Force Fitter operations, squadrons would annually undertake road deployments on the Kliniska DOL (Drogowy Odcinek Lotinskowy-highway landing strip) near Szczecin. Prior to the exercise pilots practiced 'short' landings at their home base.

Iran's Fitter fleet was closely guarded during the 1980/90s but now, it's widely known that the type remains in service and what remains of the fleet has undergone a number of significant domestic upgrades. Libya had 75 single-seat Su-22 and around 15 Su-22U.Su-22UM-3 Fitter-G trainers. During the 1990s the aircraft were routinely intercepted by US Navy carrier aircraft, when they flew towards the carrier battlegroup near the Gulf of Sidra.

The sole South American Fitter operator is the Peruvian Air Force, which ordered 12 Su-22M Fitter-Js. They flew alongside the 20 combat-proven Su-22 Fitter-Fs at Talara Air Base. The Fitter-Js were modified by the additional of a bolt-on IFR probe.

Russia was at the time the principle operator of the Fitter, but following the war in Afghanistan only a handful of Su-17M-4Rs remained in service employed on reconnaissance duties for the Frontal Aviation and AV-MF reserve units. Operational training was carried out by the 802 UAP at Kransodar. The principle AV-MF Su-17M-4 operator was the 43 OMShAE at Gvardeyskoye, with 15 aircraft and six Su-17UM-3s in service conducting missions to support the Black Sea Fleet.

Syria at one time had two attack units with around 50 Su-22M and Su-22M-4 aircraft delivered from 1978. In the late 1990s the aircraft were upgraded by Russia. For training Syria operated six Su-22Us. Prior to the disruption of the 1994 Civil War, the United Yemen air force included 30 Su-22 Fitter-Fs and Su-22M Fitter-Js delivered from 1980, together with eight Su-22UM-3 Fitter-Gs. Today the fleet is significantly reduced but, images have emerged of a small number of Fitters on taxiways preparing for take-off.

While much has changed with operators since Fitters entered wide-spread service, in Europe, Poland continues to fly its Su-22M-4 Fitter-Ks, but many other European operators have replaced or retired their aircraft. Ukraine sold a number of its Su-22M-4s to Yemen and its Su-17UM-3s to Vietnam, others remained in outside storage following independence and were slowly robbed of spare parts to keep the remaining fleet airworthy. ■

With a cartoon character carrying a bomb under its arm on the rudder, a Polish Air Force Su-22M-4 Fitter-K, clearly shows the additional ECM equipment scabbed onto the airframe.

The Fitter is a big aircraft compared to its Western counterparts and it was routine for Su-22 pilots to taxi about the airfield with the wings swept back, such as this Czech Air Force Fitter-J.

A Sukhoi Su-17M-4 from the 20th Bomber Regiment at Templin airfield. This was the only squadron to operate in the former German Democratic Republic before returning to Russia in 1993.

A WAH-64D Apache hovers at the end of its display while someone lights the blue touch paper behind them.

WRITTEN AND PHOTOGRAPHED BY ALAN FIRBANK

THE ROYAL INTERNATIONAL AIR TATTOO 2017

The world's largest military air show seems to come around increasing quickly as the years go by. This year, the RIAT theme was the USAF's 70th Anniversary. While there was a good range of American aircraft on show, there were still a great variety of other nations taking part. For many, the last minute inclusion of the two Flankers with their Il-76 support aircraft from Ukraine, stole the show.

Around two hours of the flying programme had been dedicated to celebrating the US Air Force's anniversary. The Thunderbirds demonstration occupied around 45 minutes in the air and a bit longer if you were able to see the pre-flight marching to-and-fro demonstration. Their show suffered from one of the solos missing on Saturday. With two spare aircraft available we were all puzzled as to why one of these was not flight-ready, just in case. The Thunderbirds' show is quite different from that flown by the Red Arrows and Patrouille Suisse, no loops or mid-show formation changes, etc. While the Reds will adapt their show during their performance to suit cloud base, it appears that the Thunderbirds stick to one pre-planned routine. Their commentary and use of loud music at every opportunity seemed to 'grate' on the ►

IT'S SHOWTIME!

A CV-22B USAF Osprey from the Special Operations Wing at RAF Mildenhall flew in both days and performed a great display.

people watching in my vicinity. The patriotic, over the top script did not impress us either. Both the Red Arrows and the Patrouille Suisse made the Thunderbirds look average – and the Swiss are part-timers! It has been ten years since the Thunderbirds last performance at RIAT and I think the general feeling was that such a time gap is just about right.

The cloud base was low on Saturday so the Raptor took to the end of the runway and then retreated. Granted, while the low cloud would not permit a full display, many were disappointed by the fact that they did not see the F-22 at least fly along the runway with the P-51D that was already in the air. The irony of the (again OTT) commentary the following day, telling us that the "Raptor was there to protect our freedom at a moment's notice" was not missed – as long as its a fine day!! At least we didn't have to suffer the commentary with heavy metal music on Saturday – every cloud, etc.

Another surprise item was the appearance of the B-2 on Sunday. It had flown from Whiteman AFB to Fairford for a couple of fly-bys before

This French Air Force Rafale C made a spectacular exit from Fairford. It was the first time we saw the spectacular scheme with the sun on it!

The B-2A Spirit flew the long round trip from Whiteman AFB in the States to perform flybys on Sunday; a treat that 'wound-up' some of those who attended on Saturday only.

One of the Thunderbirds' F-16Cs departs Fairford in the Monday morning sun.

It was good to see this Gulf War Desert Pink scheme on a GR.4 Tornado appear at the show.

It was a real treat to see the Ukrainians back at RIAT. Their Ilyushin IL-76MD dips its wing on departing Fairford. Quite a move for such a large aircraft – bet air traffic were having kittens!

This U-2S makes a steep departure from RIAT on Monday. They transit through Fairford regularly but only make rare appearance at shows in the UK. It was good to see one on static display this year.

When Canadian forces were still based in Europe we saw their aircraft at Air Tattoo every year. It was good to see them back again with their CC-177 and its Chinook contents.

Good to see the Thunderbirds' F-16D used during some of their displays. Here it departs at the end of the show.

When the F-22A Raptor did display, it put up a good show. Here it performs a knife-edge pass on Sunday.

Regular RIAT attenders, the Patrouille Suisse team arrive on Thursday evening in their immaculate F-5E Tiger IIs.

The C-160D Transall in Luftwaffe anniversary markings arrives for a weekend in the static park at RIAT.

When we saw the end of Ramex Delta last year we thought Mirage 2000 displays were a thing of the past. This year Couteau Delta continue where Ramex left off in their specially painted 2000Ds.

The Thunderbirds make a pass in their Sunday sunny display. I think they are supposed to be a straight line.

This Thunderbirds solos manoeuver always looks spectacular, even on a dull day.

The F-22A Raptor squeezes the moisture out of the air during its Sunday display. Lots of 'fluff' generated in tight turns for the photographers.

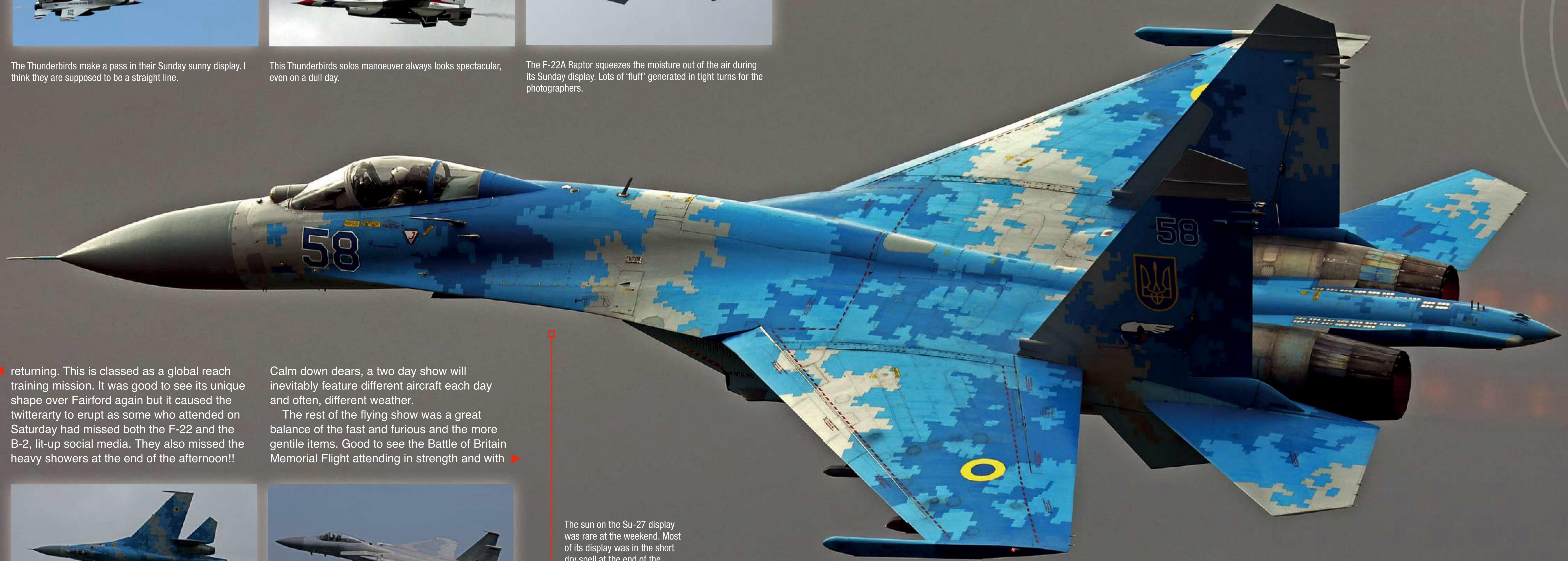
I wonder how many tins of Brasso were used to achieve this highly polished finish on this CM170 Magister? The great departure shows of the finish perfectly.

A pair of F-15Cs with an F-15E from Lakenheath performs a lovely tight flypast as part of the USAF anniversary display. Maybe they are all looking for a Thunderbirds tour.

returning. This is classed as a global reach training mission. It was good to see its unique shape over Fairford again but it caused the twitterarty to erupt as some who attended on Saturday had missed both the F-22 and the B-2, lit-up social media. They also missed the heavy showers at the end of the afternoon!!

Calm down dears, a two day show will inevitably feature different aircraft each day and often, different weather.

The rest of the flying show was a great balance of the fast and furious and the more gentile items. Good to see the Battle of Britain Memorial Flight attending in strength and with



The sun on the Su-27 display was rare at the weekend. Most of its display was in the short dry spell at the end of the show on Sunday.

The Su-27/P shows off the topside digital pattern. If only the sun had been on it!!

A Lakenheath based F-15C Eagle gives us a topside shot as it departs for home on Monday.

An RAF A400M Atlas C.1 climbs steeply from Fairford's runway for the short hop back to home to Brize Norton.

a serviceable Lancaster again. On both Saturday and Sunday, the Flanker from the Ukraine was squeezed into the programme towards the end of the day. On Sunday their time slot coincided with a brief period of sunshine between the heavy showers. Their routine was excellent, noisy and fast in an aircraft with a great colour scheme. Hopefully, they will be back soon.

The static park was covered with a good range of aircraft from many nations. At the west end of the field, the Ukrainian aircraft were parked with several fighter types carrying special schemes and the CC-177 from Canada. A Canadian Armed Forces Chinook came to the show inside the CC-17.

All in all, 2017 was another great RIAT even if the weather was mixed. Next year is the 100th Anniversary of the RAF so expect the RIAT organisers to pull out all of the stops. This year's show was a sell-out on Saturday and Sunday so I advise booking tickets as soon as you can for 2018 if you are determined to go. The show will be a full three-day event and will be something extra special. Hopefully, we will see special anniversary schemes on all of the current RAF types.

We bring you a selection of our favourite aircraft from the show. ■

The two Su-27 Flankers depart Fairford for the long flight back to the Ukraine. Hopefully, we will see them back again soon.

The interesting shape of the Textron Scorpion departs from the static park at RIAT. We think it is still looking for a customer.

A touch of airbrake rather than parachutes slows the Flanker at the end of its Sunday display slot.

One of the furthest travelled participants at RIAT was this Boeing E-7A Wedgetail belonging to the RAAF. Great to see them at this year's show.

The Czech Air Force brought several aircraft to Fairford this year. Their WWII connection with the RAF is commemorated on this fine scheme on one of their Aero L-159T-1s.

This Italian Air Force A-200A Tornado was in probably the most spectacular paint scheme at RIAT 2017. Seen here to best advantage in the Monday morning sunshine.

Grrrrr . . . Great Tiger artwork on the tail of this German Air Force Eurofighter EF2000 stands out on the sunny Monday departures day.

Phantom Phans were pleased to see the pair of F-4Es from Greece at the show again. Will we see Phantoms at Fairford again?

Always great supporters of RIAT, the Belgian Air Force brought a handful of F-16s this year. Here their display F-16 makes a noisy departure for home.

EDITORIAL

IN THIS ISSUE…

Written by Spencer Pollard

Hello everyone, welcome to the October 2017 edition of your favourite aviation modelling magazine!

This month's MAI is another action-packed edition with some very fine models for you to enjoy!

For many years now we have extolled the virtues of 1:72 modelling and though we've often concentrated on larger scales, we've certainly featured more than our fair share of models in this extremely popular scale. This month we are therefore delighted to be able to bring you a number of articles that concentrate on 1:72 aircraft modelling that we hope will show you that models need not be large, nor complex, to be attractive and eye-catching.

The first of these articles deals with the delightful ICM I-153. Tiny in size, this wonderful kit allows the modeller the opportunity to create an attractive model either straight from the box, or as we have done, with a little extra detail. Thanks to the aircraft's simple lines and sparse rigging, it also serves as a primer for those keen to dip their toes into the waters of biplane modelling, with a less complex project. Add to the party a wonderfully simple but attractive colour scheme and this is one model we think you will enjoy seeing and hopefully building for your own collection.

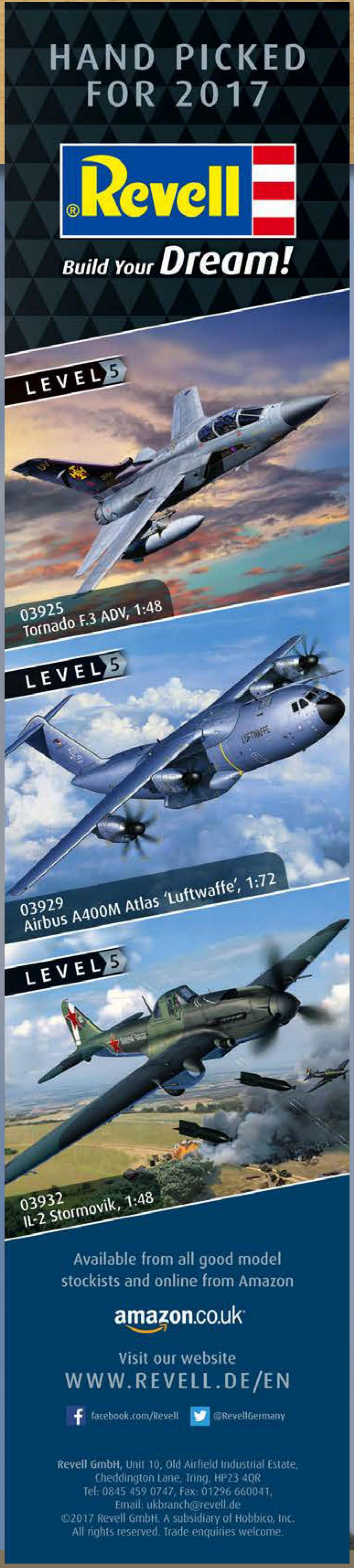
The second feature is a real stunner, dealing as it does with the construction of Hasegawa's classic F-14A Tomcat. Often seen as difficult to build, Hasegawa's family of big cats allows fans of this type to build a collection of accurate models — again, from the box — that are both highly detailed and if the right scheme is chosen, highly attractive. Well, we've certainly chosen the right scheme, a Topgun aircraft in pseudo-Russian splinter colours creating the perfect image in miniature and the star of this month's front cover.

And finally, the Lancaster is a perennial favourite amongst modellers, so it's no surprise to see in appear in MAI. What may be surprising though is the choice of markings and colours in which our model is decorated, a post-war aircraft in white and black being chosen as something different from the norm. Based on Revell's cheap-as-chips kit, this is one model that will dominate your display case with breaking the bank…

AND FINALLY…

The F-35A Lightning II is likely to form the backbone of many airforces over the coming years, so kit manufacturers are understandably keen to add the aircraft to their ranges. The latest and most certainly largest to appear, is Italeri's 1:32 offering, a kit that replicates the initial F-35A variant. We have a detailed review of this new kit along with some images of the real aircraft as it appeared at the 2016 Royal International Air Tattoo to help you to build the kit - either as we have, or in more representative squadron colours!

So this is the October edition of Model Airplane International. I hope you enjoy this issue and I hope to see you again next month! ■



Fighting Falcons and flares – this year the Belgian Air Force took the lead with an F-16AM (FA-123) from 1st Squadron flown by Solo team Display pilot Commandant Tom 'Gizmo' De Moortel.

The International Air Day at Royal Naval Air Station Yeovilton always manages to pull together an unusual mix of aircraft for its annual air show and this year's event on July 8 proved no exception. Although the traditional finale of the Commando Helicopter Assault was cancelled for this year, due to the Commando Helicopter Force's Merlin fleet currently being upgraded, and a large number of personnel deployed on exercises and operations, the static and flying display was packed with first time visitors and air forces making a welcome return to the naval base.

Aircraft in the static park showed the Fleet Air Arm at its best, with the types ranging from the Cold War, through to the present day and beyond, all carefully arranged for enthusiasts to photograph and modellers to see all those tiny details on the airframes, which may need to be added to a model. Special schemes were also on show with the Czech Air Force L-159 Advanced Light Combat Aircraft (ALCA) of the 212th Tactical Squadron painted in the markings of Czech Second World War ace Wing Commander General František Perina's Spitfire.

Yeovilton has always collected together the best helicopter display and for this air day and the Danish Air Force certainly made an impact with their pair of Super Lynx

WRITTEN AND PHOTOGRAPHED BY GLENN SANDS

YEOVILTON INTERNATIONAL AIR DAY 2017

The star of the flying display for aviation enthusiasts was the Rafale M from Flottille 11, which still retained its Tiger Meet markings – complete with 'red eyes' on the upper surface. All images Glenn Sands

With Fleet Air Arm Lynxes retired the type is getting a rare sight these days. The Aéronavale brought along a Lynx HAS.4 from 34 Flottille based at Lanvéoc-Poulmic.

Packed with details for the modeller this restored airworthy Auster AOP.9 WZ706 was painted in the colours this actual aircraft wore during operations in Malaya.

One of the two L-159 ALCAs from 212th Tactical Squadron lands after taking part in a simulated a ground attack sequence which involved plenty of pyrotechnics.

The future of the Fleet Air Arm and the Army helicopter's force is the Wildcat. This Navy HMA.1 (ZZ379) took part in a 'mock' rescue scenario in the flying display.

Mk 90Bs from Eskadrille 723. The type is due to be retired this year so the Lynx is certainly becoming a rare breed these days. One Danish example was painted in a special scheme that marked the distinguished service the type has provided.

One area of the static was dedicated to Fleet Air Arm types, which included a number of aircraft brought out of the museum. The line-up represented some classics including the Sea Fury, Sea Harrier, Sea Venom and Phantom. Volunteers from the Royal Navy Historic Flight were on hand to answer questions regarding the recent force landing of the Sea Vixen, which has now been stripped of many of the damaged parts and is now in the long process of getting it back into the air.

The flying display included some gems, and with the British summer playing ball the ▶

Reds Six and Seven of the Red Arrows perform their opposition pass in front of the crowd. I've seen it more than a dozen times – but it's always impressive!

Weathered and exhaust stained this Merlin HM.2 indicated that it has seen extensive service recently with 824 Naval Air Squadron.

Flypast by the two Rafale Ms, from 11 Flottille in 'dirty' configuration – with everything hanging down.

There were plenty of special schemes at the air show, one of the best was worn by this Belgian F-16AM (FA-132), which was celebrating 1st Squadron's centenary.

One of three L-159 ALCAs at the show, the other two wore their regular two-tone grey scheme. This ALCA (6053) was painted in a replica wartime Spitfire scheme.

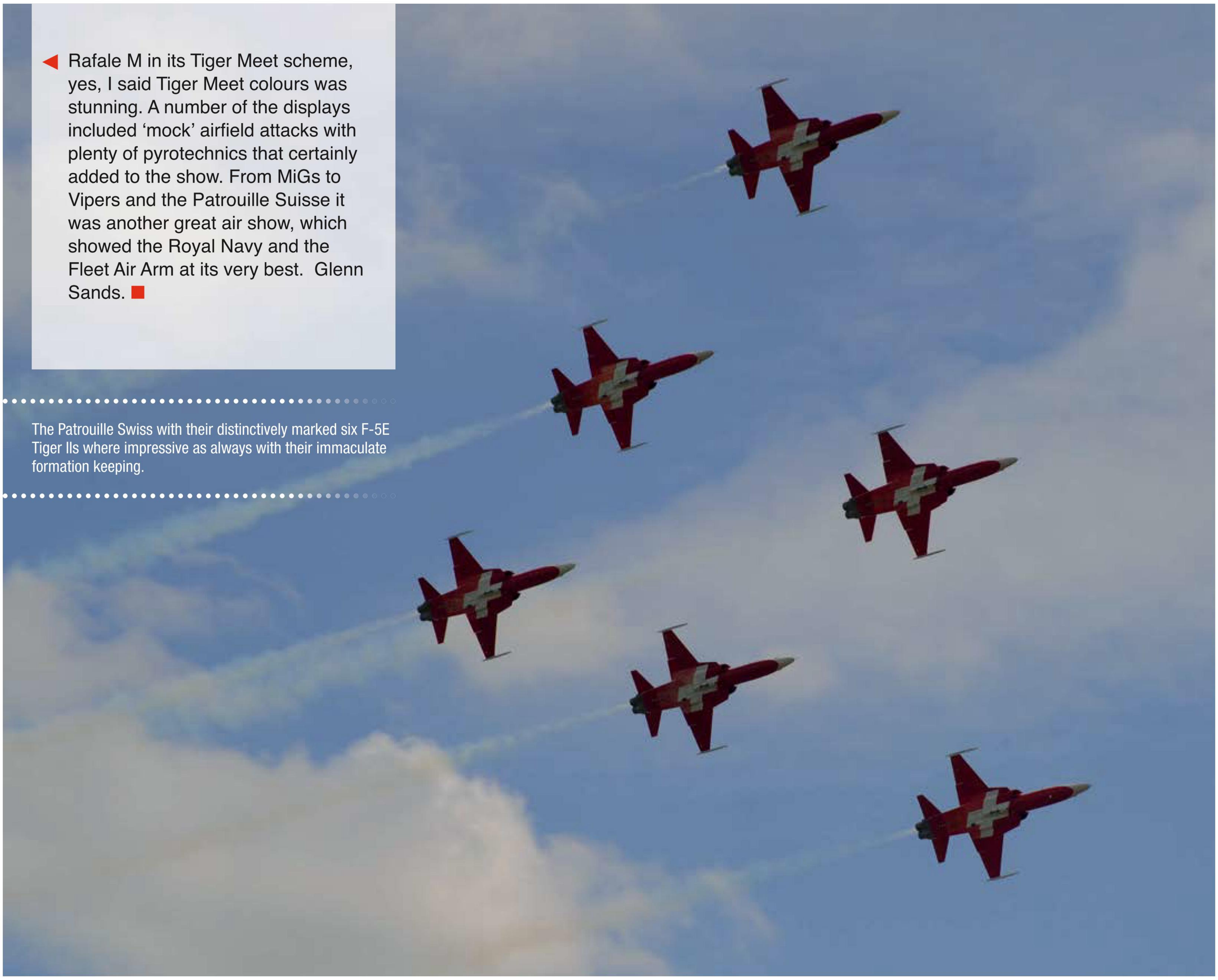
Despite the damage sustained during its forced landing at Yeovilton, the volunteers of the Royal Naval Historic Flight where keen to state that they'd have their Sea Vixen D.3 back in the air where it belongs in due course.

The RAF was not to be outdone in the special schemes competition at the Air Day with Tucano T.1 (ZF378) from 72(R) Squadron, which is celebrating its centenary, painted in the colours of one of its World War Two-era Spitfires.

As it used to be… One can only guess what it was like back in the 1970s when Yeovilton's main hardstand groaned under the weight of Phantoms from 892 Naval Air Squadron. Recreating that scene was XV588 a former FG.1 which previously served with the RAF.

A rare visitor, but hopefully one that will be seen more often at British air shows is MiG-15UTI (N104CJ). Owned by the Norwegian Air Force Historical Squadron, it's a licence-built Polish SB Lim-2A and is unique in north Europe's skies.

◀ Rafale M in its Tiger Meet scheme, yes, I said Tiger Meet colours was stunning. A number of the displays included 'mock' airfield attacks with plenty of pyrotechnics that certainly added to the show. From MiGs to Vipers and the Patrouille Suisse it was another great air show, which showed the Royal Navy and the Fleet Air Arm at its very best. Glenn Sands. ■



The Patrouille Swiss with their distinctively marked six F-5E Tiger IIs where impressive as always with their immaculate formation keeping.

Now devoid of squadron markings, this Typhoon FGR4 (ZJ950) was actually from 1 Squadron and flown into Yeovilton by a Fleet Air Arm pilot on a three-year exchange tour with the RAF.

Not the most attractive helicopter, but certainly one of the most capable the NH 90-NFH is replacing the Lynx in many NATO countries. This Dutch example (N-175) complete with special markings was from 860 Squadron based at De Kooy, northern Holland.

The past meets the present. With a Royal Navy Merlin and Army Apache in the background the privately owned Westland Whirlwind HAR.10 (XJ729/G-BVGE) was making its debut flying display at Yeovilton, in its hard-to-miss bright yellow rescue scheme.

The Army Air Corps Apache AH.1 display flown by 4 Regiment is now reduced to a solo machine which is a great shame but, the explosions and radio chatter played over the airwaves gave an indication of just how complex helicopter modern attack missions are.

A close-up illustrating the modifications made to the rear-cockpit of Martin Baker's Meteor. The T.7 is currently conducting trials with the Mk 16E ejection seat used on the F-35 Lightning II.

REFERENCE FEATURE

Pensacola's F-14D surrounded by decades of naval aviation, including, most pleasingly — to this scribe at least — a wonderfully restored AV-8C Harrier.

PHOTOGRAPHED AND WRITTEN BY SPENCER POLLARD

F-14D TOMCAT

PLENTY OF CLOSE UP SHOTS TO HELP YOU DETAIL YOUR NEXT MODEL OF THIS FAMOUS, SWING-WING FIGHTER.

Earlier this year I had the chance to visit The National Naval Aviation Museum, the world's largest Naval Aviation museum and one of the most-visited museums in the state of Florida. During my time there, I was able to photograph a huge number of fantastic aircraft, one of which you can see here, the beautiful F-14D Tomcat.

The Museum's F-14D, Bureau Number 161159, logged its final combat mission in the long history of the Tomcat, one that concluded when it trapped on the deck of the carrier Theodore Roosevelt (CVN-71) on 8 February 2006. The aircraft was piloted by Captain William G. Sizemore, II. It was flight delivered to Naval Air Station (NAS) Pensacola, Florida, directly from Fighter Squadron (VF) 213, to which it had been assigned since 1997. Originally accepted by the Navy as an F-14A in December 1980, it was converted to the F-14D configuration in September 1991. The aircraft flew its first combat missions over Afghanistan as part of Operation Enduring Freedom, logging missions from the deck of the carrier Carl Vinson (CVN-70). The last of its 224 combat sorties occurred in the skies over Iraq. ►

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1: The cockpit canopy on the F-14 is large and imposing, its rear-mounted hinge allowing ingress and egress from the cockpit should the urgent need arise. Note the mirrors and canopy locks that decorate this part of the aircraft's cockpit furniture. 2: A fighter's not a fighter if it cannot carry all manner of whizz-bangs, the F-14 being no different in this regard. Along with underfuselage pallets, the aircraft carries shoulder pylons from which can hang Sidewinder, Sparrow and Phoenix missiles, as well as — on later versions such as the F-14D — LANTIRN targeting pods. The Sidewinder rail is missing from the museum's aircraft. 3: As mentioned in our build article, the union between the swinging wing and fuselage opening is very tight on the real aircraft, a point proven by this image… 4: Hitting a deck at speed dictates that carrier-borne aircraft be fitted with larger than average undercarriage legs, those on the Tomcat being more than up to the task. 5: The Tomcat's intakes are fixed, the flow of air through the tunnels being adjusted using a movable ramp, the front edge of which can be seen here. 6: The main undercarriage legs mirror the nose gear's bulky construction and simple design. 7: The F-14's twin tails are very simple in terms of construction and design, their look having remained remarkably constant throughout the Tomcat's time in service.

The head box for the aircraft's Martin-Baker Aircraft Mk. GRU-7(A) seat shows off for the camera. Though incomplete (the seat has no pull-handles for instance), the museum's aircraft's cockpit nevertheless allows visitors to see how these seats looked in service.

Over these pages you'll find some detail shots of the aircraft that will help you build not only a F-14D, but also, thanks to a concentration on areas that carried over from the earlier F-14A on which it was based, that aircraft was well. We hope that you find the images useful and that you enjoy seeing each one as much as we enjoyed taking them, earlier this year. ■

8: Unfortunately for those keen to see the finer features of the RIO's office, much is covered over with plastic sheet. Still, it was worth a picture anyway don't you think? 9: Jet fighters are notoriously short-legged, so often carry additional fuel tanks, two of which hang under the F-14, one under each of the aircraft's already low-slung intakes. 10: Wing-tip slime lights reveal their secrets. Note their virtually matt finish and pseudo carbon fibre weave. 11: The intake lip is a fibreglass material that remains unpainted. 12: Fans of fine detail could have a field day replicating all of these pipes within the main gear bay! 13: Another view of the seat. Note the detail and stencils that form part of its safety warnings. 14: A final view of Pensacola's stunning F-14D. The ultimate carrier-borne fighter? We think so…

WRITTEN AND PHOTOGRAPHED BY SPENCER POLLARD

F-35A LIGHTNING II REVEALS SOME OF ITS SECRETS...

The Royal International Air Tattoo is often a treasure trove of new aircraft, so it came as no surprise to see the F-35A/B Lightning II appear at the 2016 event. Seen in both the air display and also close to the crowd at the end of the static park, the appearance of a number of these aircraft in both Alpha and Bravo models, gave the huge crowd the chance to see it in action and detail, the results — to this scribe at least — being more than exciting! To go with John's splendid build of the huge 1:32 Italeri kit, we are delighted to bring you a few shots of the Alpha model so that you can see what these aircraft actually look like and hopefully, they will help you get the best from any kit that you chose to build…

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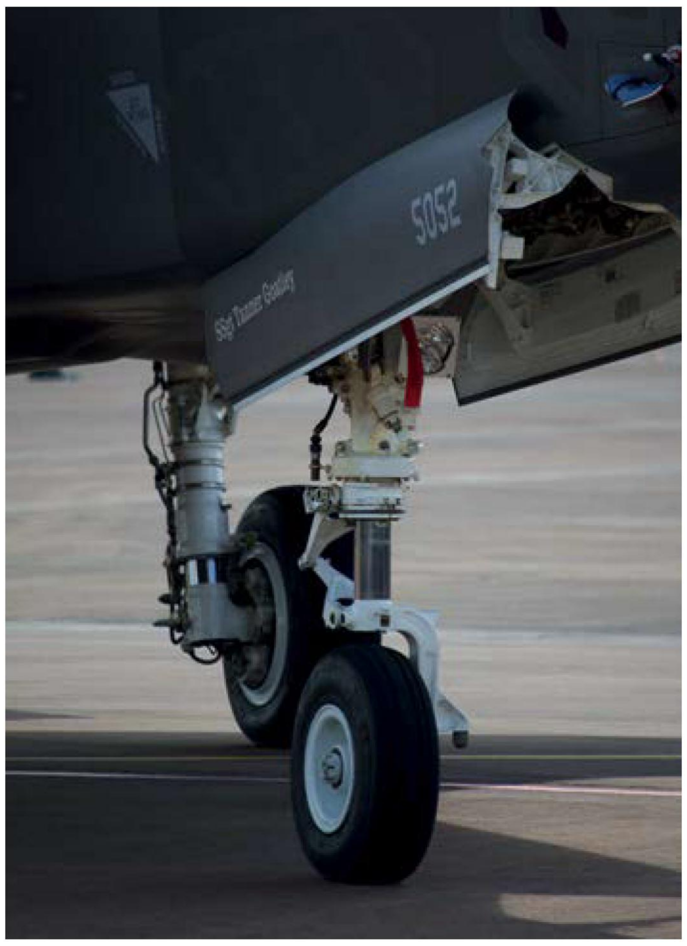
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RESCUE
TURN TWO MASTER LATCH
AND AFT MASTER LATCH
TO OPEN DOOR

HOW TIME FLIES...

> *"Having converted a 1:24 kit into this aircraft, I can't really hide how excited I am to see this aircraft appear as a stock plastic kit"*

This time last year I was desperately trying to complete what was at the time, the most complex aircraft model I'd ever attempted, my 1:24 Harrier. It's hard to believe that a year has passed, but I guess that's simply the reward for working to constant deadlines, always being busy and getting older!

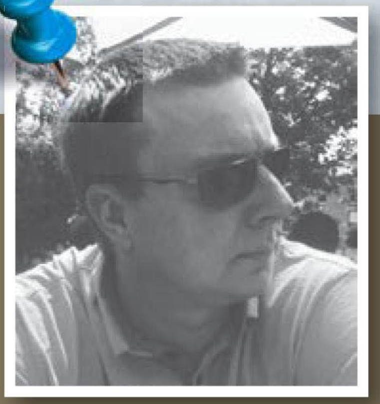
The reason I bring this up here is that I've been sent another look at the box-art for the up-coming Kinetic 1:48 Harrier T.2/4, which it is hoped will be released at this year's IPMS Scale Modelworld. Having converted a 1:24 kit into this aircraft I can't really hide how excited I am to see it appear as a stock plastic kit, but I do wonder if my now rather in-depth knowledge of the type's subtleties will make me look at it with rather more interest, than would perhaps be the case with other releases. Discovering as many of the nuances of the real aircraft as I did, there will be little room for error in my mind, but I hope that that doesn't remove the gloss from what will be — to me — the most exciting release of the year. I certainly have high hopes for it and know that Kinetic are trying as hard as possible to create an accurate model and thanks to those that are helping the company achieve that aim, I certainly believe that they will release a kit that will delight Harrier fans such as I!

But such in-depth appraisals will be nothing compared to the problems that I know I will face when it comes to which colour scheme to finish the model in; there is simply so much choice that I'm already scratching my head and have very little idea as to which aircraft I will ultimately build…

So it looks as though I will be returning to my favourite aircraft very soon, after a year away from it. I can't wait!

See you next time. ■

EDITORIAL



IN THIS ISSUE…

Written by Spencer Pollard

Hello everyone, welcome to the November 2017 edition of your favourite aviation modelling magazine!

This month we have returned to our core principles and decided to deal with the build and assessment of four new kits: Kittyhawk's 1:48 Huey; Tamiya's 1:48 Ki-61 Hien; Tamiya's 1:32 F4U-1D Corsair and the brand-new Airfix 1:48 Sea Hurricane.

All of these kits offer the enthusiast the chance to build highly-detailed replicas of some of the world's most famous aircraft and as such, we are delighted to show you how to build each one, improve areas where needed and in the process, build models that you will be proud to display.

We begin with the Corsair. Alan Price has taken this project on, building and painting the kit over the next three issues. Being so complex, we decided that it would be a travesty to look at it as part of an abridged feature so elected to split it into three parts, each one offering all of the information that you will need to build this spectacular kit. We hope you approve of our approach and enjoy the results.

The second major feature concerns another Tamiya kit, this time their delightful Ki-61 Hien. Tamiya are as well-known for their 1:48 kits as they are for those in larger scale, the results often being equally spectacular. Their Hien is certainly no different in this regard, the contents of the box combining with ease to create a stunning replica of what must be one of the most attractive aircraft of WWII. Though very easy to build, it's certainly a challenge to paint, but we'll guide you through the process in our specially-extended feature.

Not all kit builds run on rails, so when Mike Williams decided to tackle the new Airfix 1:48 Sea Hurricane, he certainly wasn't expecting to build two kits after problems with the fit of the first! But build two he did, the second being much more successful, the story of which he will tell this month…

The fourth and final review deals with Kitthawk's depiction of the ubiquitous UH-1 or Huey, as it is more commonly known. Having been involved in the creation of the kit, Floyd S. Werner Jr was the perfect man to take a look at the results, offer a guide to the building and painting of the kit and any improvements that may be needed along the way. This is a lengthy review with plenty too read, but we hope that you enjoy our slightly different approach and the information that it offers!

So this is the November edition of Model Airplane International. I hope you enjoy this issue and I hope to see you again next month! ■

WRITTEN AND PHOTOGRAPHED BY GLENN SANDS

CARRIER POWER – US STYLE

WE VISIT THE INCREDIBLE, USS GEORGE H.W. BUSH

After its second deployment in support of Operation Inherent Resolve, which witnessed the nuclear-powered US carrier USS George H. W. Bush (CVN 77) along with its battlegroup conduct five months of operations against Islamic State in Iraq and Syria. The carrier made a welcome five-day port visit into UK waters, anchoring off Stokes Bay in the Solent on July 27. It was an opportunity for a number

Looking worn and with numerous patch-ups on their paint work, two F/A-18Cs of VFA-37 illustrate just how dense the flight deck of CVN-77 is with F/A-18 Hornets. This will likely be the last time legacy Hornets will be on a carrier deck visiting UK waters. All images Glenn Sands

The CAG bird of VFA-87 ‘Golden Warriors’ F/A-18E 168910/AJ300 wears a full colour tail and an impressive tally of mission markings on its nose.

Not to be out done in terms of bright colour schemes the MH-60R CAG 167063/AJ700 of HSM-70 ‘Spartans’ wore smart yellow and black trim over its regular grey camouflage. Note the soft sprayed black edge on the forward engine cover.

Just one example of the impressive mission markings worn by many of the F/A-18s of CVW-8. Each squadron had adopted its own style of recording strikes.

Super Hornets are now the backbone of the US Navy carrier air wing, with both F/A-18E and Fs models performing a multitude of missions. This stern view of the flight deck includes the blue tailed CAG jet, F/A-18F 166663/AJ200 of VFA-213 ‘Blacklions’ in the centre of the image.

of invited guests to get a close-up look at Carrier Air Wing 8, whose aircraft had flown more than 1,000 combat sorties and expended 813,000 pounds of ordnance on Islamic State. An indication of how intense air combat operations were, was indicated by the large amount of mission markings painted on the nose of the F/A-18s carefully positioned on the carrier’s deck.

Carrier Air Wing 8 (CVW 8) is one of the few that still operates legacy Hornets, and this visit was probably the final opportunity to see F/A-18Cs on a US carrier before the last few remaining squadrons transition to Super Hornets. CVW 8 is comprised of the following squadrons:

- VFA-31 ‘Tomcatters’ F/A-18E
- VFA-87 ‘Golden Warriors’ F/A-18E
- VFA-213 ‘Blacklions’ F/A-18F
- VAW-124 ‘Bear Aces’ E-2C II/C+
- VAQ- 131 ‘Lancers’ EA-18G
- HSC-9 ‘Tridents’ MH-60s
- HSM-70 ‘Spartans’ MH-60R
- VFA-37 ‘Raging Bulls’ F/A-18C

Fortunately for those seeking colourful Carrier Air Group (CAG) jets and helicopters there were plenty aboard but, perhaps most significant was the F/A-18E belonging to VFA-37 which shot down a Syrian Air Force Su-22 Fitter on June 18 near the Islamic State stronghold of Raqqah, Syria. This was the first US air-to-air kill since a USAF F-16 downed a Serbian MiG-29 during the Kosovo campaign in 1999. ●

Big from any angle, the USS George H. W. Bush anchored at Stokes Bay, off the coast of Gosport dominated the Solent skyline for the five days.

From this angle, the larger size of the Super Hornet is clear. Note the position of the flaps and slats when the aircraft is at rest.

Although it had its rotors removed for maintenance this didn't detract from what had to be one of the best Deputy CAG schemes of CVW-8 on this MH-60S 167901/AJ610 of HSC-9 Tridents. No all we need is a decal sheet…

Hawkeyes have been on US carrier decks since the Vietnam War, but those of VAW-124 'Bear Aces' are far removed from those early models. Upgraded with the electronic suites and radar they are designated E-2C IIs. All four examples aboard wore high-vis colours.

Heavily weathered an F/A-18F of VFA-213 'Blacklions' has an impressive tally of mission markings on its nose.

The Su-22 Fitter killing F/A-18E 168912/AJ-302 flown by Lt Cdr Michael Q. Tremel from Strike Fighter Squadron VFA-87 'Golden Warriors'. It shot down a Syrian Su-22 with an AIM-120 AMRAAM near Raqqah on June 18.

The Deputy CAG F/A-18C Hornet of VFA-37 'Ragin' Bulls' has a smart blue finish over its standard USN grey scheme. The names of personnel killed in action that served in VFA-37 over the years are painted on the inside of the tail.

Wings folded and its cockpit protected against the sun with silver foil an F/A-18E of VFA-31 'Tomcatters' is chocked and chained to the deck.

Among the newest aircraft to operate from the deck are EA-18G Growlers. This very clean example was from VAQ-131 'Lancers'. Despite its clean airframe the jet has flown 50 combat missions over Iraq and Syria.

Note all jet exhausts are black inside! Obviously having recently undergone some maintenance work, this F/A-18E 168916/AJ306 from VFA-87 'Golden Warriors' shows the subtle differences in its paintwork and where weathering occurs on the airframe. Note the wingtip missile rails have been removed.

SCALE 1:32

SPECIFICATION:
Tamiya 1:32 F4U-1D Corsair
Kit No. 60327
Materials: IM/PE/Mask
Availability: All good model shops
Price: £139.99

BEFORE STARTING:
Tamiya Extra Thin Cement
Deluxe Materials Plastic Magic
Gunze Sangyo Mr.Cement S
Tamiya masking Tape
Swann-Morton Scalpel No.3 handle with no.11 blades
Deluxe materials Perfect Plastic Putty
Micro drill and bits
Roket Rapid Super glue
Roket Blaster
AK Interactive Worn Effects
0.5 mm lead wire

AIRBRUSH:
Iwata Revolution CR

PAINTS USED:
Humbrol Enamels
33 Matt Black
34 Matt White

Mr. Hobby Aqueous (Gunze):
H58 Interior Green

Alclad II Lacquers:
ALC101 Aluminium

BUILT AND WRITTEN BY ALAN PRICE

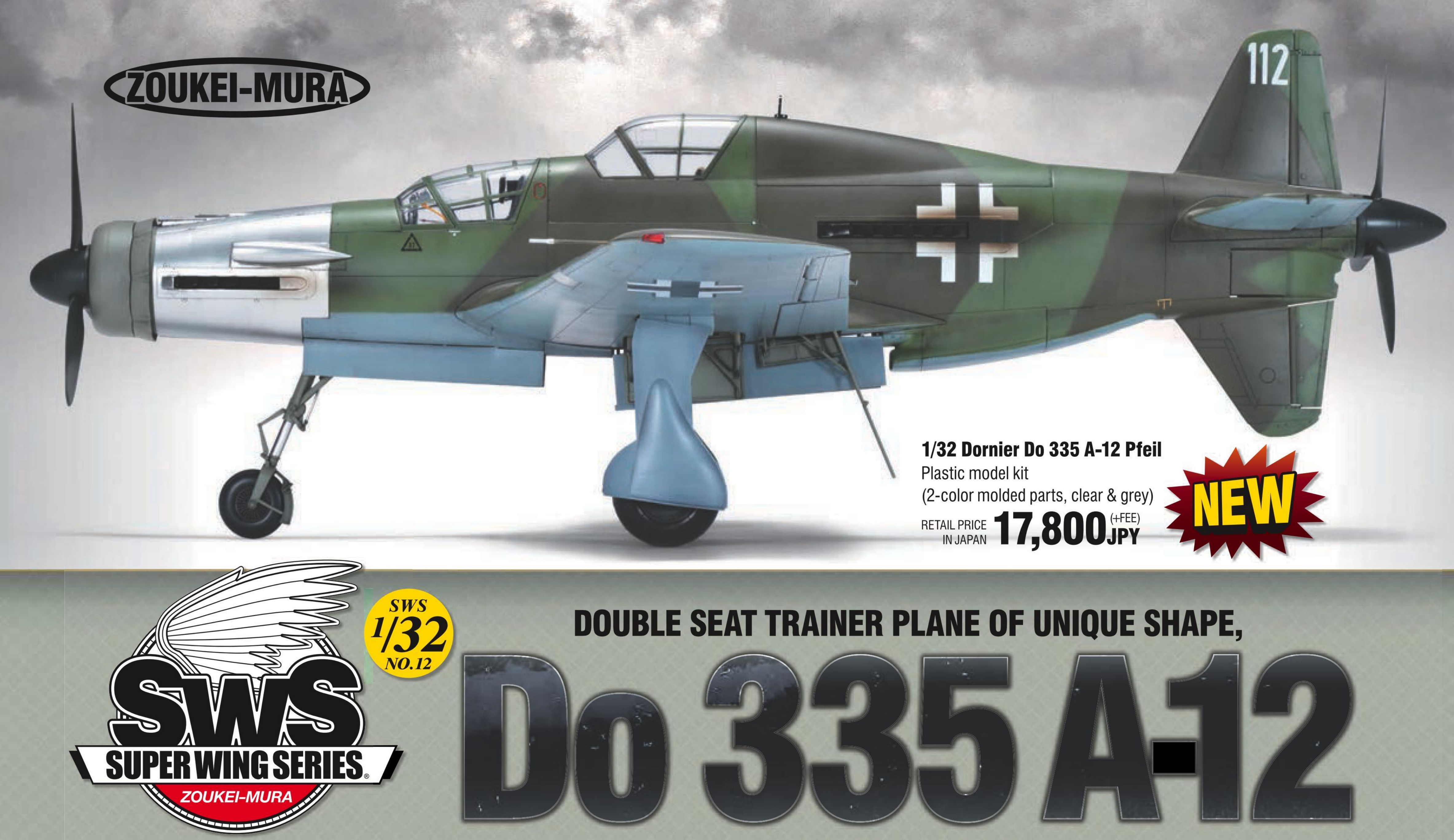
WHISTLING DEATH

We take a detailed, multipart look at the latest Tamiya 1:32 superkit, their incredible F4U-1D Corsair

Tamiya's range of 1:32 kits has become somewhat legendary amongst modellers. Over the past few years these kits have been acknowledged as some of the best available, both in terms of fit and detail. I currently have three in my stash – the Spitfire IX, Mustang and Mosquito. However, up to now I hadn't built any of them.

Back in the summer (you remember that, it was the week we had some sunshine in July?) the editor messaged me on Facebook and said 'my shed is being demolished so I won't be building anything, how do you fancy doing the new Tamiya Corsair?". After feigning disappointment over the shed I then said 'yes' to the Corsair and duly, a very large box arrived in the post.

The actual F4U-1D kit wasn't ready to ship at this point so I received an F4U-1A plus a box containing the new runners for the 'D' version. The quality of the parts has been covered with ▶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PHOTOGRAPHED BY HARIS BOULTON

BOLTON PAUL DEFIANT MK.I

WE TAKE A VISIT TO THE RAF MUSEUM COSFORD TO PHOTOGRAPH THEIR RECENTLY DISPLAYED AIRCRAFT.

The single surviving complete example of the type is a Defiant I, N1671, that was on display as a nightfighter at the Royal Air Force Museum in Hendon, London. It was one of four Defiants delivered to No. 307 Polish Night Fighter Squadron at RAF Kirton in Lindsey, Lincolnshire, England on the 17th of September 1940. It was passed to No. 153 Squadron at the end of October 1941 and 285 Squadron in 1942. In 1954, it was identified for storage as a historical aircraft and passed to the RAF Museum in 1971.

The aircraft was moved on the 20th of May 2009 to Rochester Airport, where it was restored by the Medway Aircraft Preservation Society (MAPS). It was returned to Hendon on the 6th of December 2012, before being moved from Hendon to the RAF Museum Cosford in November of 2016 for display in 'War in the Air' hangar, where it is now undergoing final assembly. (Wikipedia)

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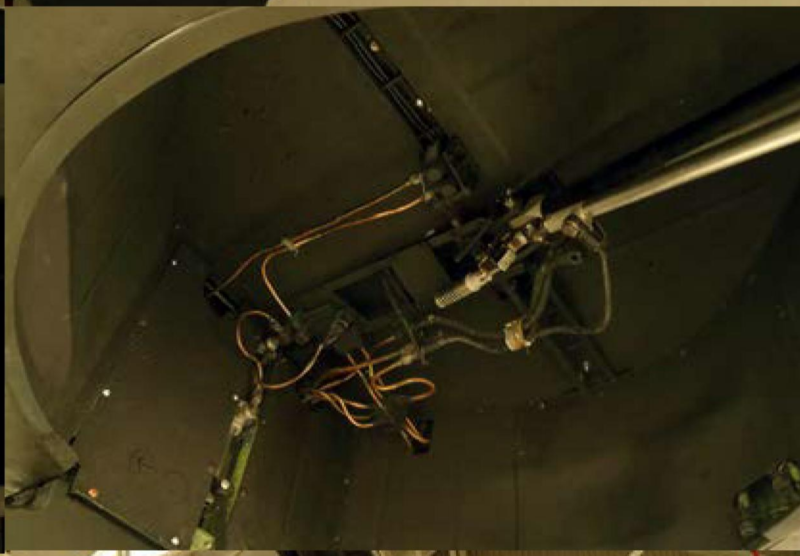
EW



JUNKERS JU87B-2/R-2 STUKA

Scale:1:72/Airfix/Materials IM/Kit No. A03089/All Good Model Shops/Price Guide:£12.99

SCALE 1:72

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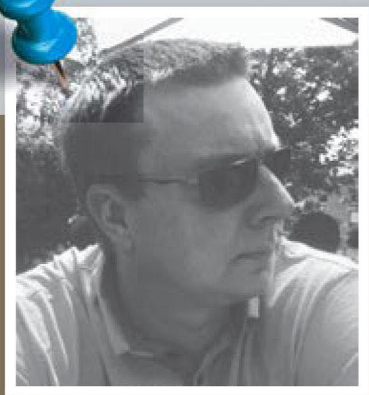
Parts: 176

Length: 16,0 cm

EDITORIAL



IN THIS ISSUE…

Written by Spencer Pollard

WELCOME TO THE JET AGE!

This issue is somewhat different to others published recently in that we have decided to offer only modern subjects for our builds, rather than being concerned with subjects across a more diverse period of time. We hope you approve!

Before diving into the two kit reviews that we hope you enjoy this month, we'd like to introduce two features that cover the same aircraft, though in two different scales. The F-18 Hornet is one of the most recognisable shapes in the sky, so we thought it about time that it was covered in detail within the pages of MAI. Thankfully for the modeller there is no shortage of kits of this family of aircraft, so modellers will not be hamstrung by a paucity of choice should they decide to have a go at building one in miniature. This month two kits were chosen, Academy's 1:72 offering and then the larger Kinetic kit, the latter creating a slightly stripped-back variant without weapons. Both of these kits are excellent from the box, nevertheless it was decided to detail both with aftermarket and scratchbuilt features to help both improve their look and in the case of the Academy kit, create the dropped flaps and slats that are so much a feature of the aircraft on the ground. The two builds are offered as photographic essays so you will have little problem following what we did to create the models seen in this issue, all of the items used and techniques employed along the way, being clear and easy to follow! The features start on page 44.

Along with the extended look at the Hornet, we also have two in-depth kit reviews, Greg Phillips' look at the superb Revell 1:48 Tornado F.3 and then John Wilkes' appraisal of the Kitty Hawk Models 1:35 AH/MH-6J Night Stalker. Both of these fine kits can be turned into real show-stoppers in the hands of experienced modellers and that has certainly been proven to be the case this month, the resulting replicas being testament to both the skill of the authors involved and the quality of the basic kits. But don't be put of should you be less experienced, you will still find much to enjoy and inspire from both of these features, features that appear on pages 24 and 32 respectively.

And finally, we have three kit previews that will hopefully set the juices flowing and the wallets opening as the year progresses, with looks at the Revell 1:32 P-51D-5NA Mustang, Azur 1:32 IAR-80A and Airfix 1:48 North American P-51D Mustang. In providing a balance to our modern subjects this month, these kits also point to lengthy, in-depth features that we are planning for the next few months, as well as illustrating that WWII and its aircraft, is as fertile ground as it ever was for the world's kit manufacturers!

So this is the February edition of Model Airplane International. I hope you enjoy this issue and I hope to see you again next month! ■

WRITTEN AND PHOTOGRAPHED BY GLENN SANDS

MIDDLE WALLOP AIRCRAFT ENTHUSIASTS FAIR AND MODEL SHOW

We visit our final model show of 2017…

It's hard to believe that the Aircraft Enthusiasts Fair and Model Show at The Museum of Army Flying at Middle Wallop Hampshire is now in its tenth year. And still there's the buzz of enthusiasm from attendees and plenty of bargains to be found on the traders and club stands, carefully placed amongst the museum exhibits. This was certainly the case on Sunday November 19.

On the weekend straight after IPMS Scale Model World you might be thinking modellers in southern England were keen to take a weekend off from kits – far from it. Model clubs across the south including West Middlesex Scale Model Club, IPMS Salisbury, Tangmere Sector Modellers, Poole Vikings and the Boscombe Down Aviation Collection model club made their way early to the museum with modellers setting up their displays, all were keen to exhibit the latest 'builds' from their club members.

Unlike last year where there were a host of stunning Airfix and Revell Shackletons on show from a number of clubs, this year the displays were more of a mix, but inevitably there were a number of 1:72 and 1:48 Army Air Corps (AAC) Lynx AH.7/9 models on display. A few of which were cleverly displayed just a few feet from a retired Lynx AH.7 that takes pride of place in one of the display halls.

For modellers the show has always had the reputation of being a great place for kit bargains, and this year didn't disappoint, with a number of much-sought after 1:72 Airfix Javelins for sale and for me, a couple of Revell 1:72 Fw 200 Condors were scooped up for a 'good price' hot-on-the-heels of reading the new Crecy book on the type a few weeks earlier.

The Aircraft Enthusiasts Fair and Model Show at the museum has loyally been organised by Mark Roberts of Aeromerobilia and unfortunately this year's event might be the last? In late 2018 the museum undergoes

The museum's exhibits cover the entire history of the Army Air Corps and allow close inspection of many. Equipped with wooden rotor blades this Skeeter previously served as a weapons and radio trials platform at RAE Boscombe Down after which it was issued to 1 Wing AAC at Detmold, West Germany. It arrived at Middle Wallop in late 1967 where it served in the liaison role.

THE F-18 HORNET IN SERVICE AROUND THE WORLD - FROM LEGACY TO SUPER BUG

ALAN FIRBANK PHOTOGRAPHS THIS ICONIC AIRCRAFT FAMILY TO PROVIDE MODELLERS WITH PLENTY OF COLOURFUL INSPIRATION, FOR SOME FANTASTIC POSSIBILITIES IN MINIATURE.

Seen at US Naval Air Station Atsugi near Tokyo, an F/A-18C, the CAG aircraft with the World Famous Golden Dragons in December 2007.

1. F/A-18F leaving the runway after demonstrating with a full weapons load at RIAT Fairford, July 2016.

2. The McDonnell Douglas company test pilot taking off in the F/A-18F for a demonstration with a full load at RIAT 2016.

3. A Spanish Air Force F/A-18C in special Tiger Meet markings departs RAF Fairford at the end of RIAT 2017.

4. Chippy Ho, the CAG aircraft with VFA-195 at Atsugi in Japan in December 2007. This scheme has appeared in several kits and decal sheets.

5. A close look at the wing fold on a US Navy F/A-18C Hornet.

6. A tatty-looking F/A-18C belonging to VFA-195 at Atsugi in December 2007.

7. VFA-17's Royal Maces new F/A-18E CAG aircraft at Atsugi in December 2007. Some units had the new Super Hornets while others were still awaiting their new planes.

8. The Golden Dragons F/A-18C comes to a stop after a training flight from Atsugi in December 2007.

9. The ground crew secure their F/A-18C following a training mission from Atsugi in Japan in December 2007.

10. The easiest way to tell an F/A-18C from the newer Super Hornets is the large rectangular intake as seen on this F/A-18E.

11. US Navy CAG aircraft are normally spick and span with minimal weathering. Here the VFA-102 Diamondbacks' F/A-18F gets a wash and brush-up at Atsugi in Japan.

12. A VFA-195 Dambusters F/A-18C looking well-used on finals to Atsugi's runway.

13. VFA-102's CAG Super Hornet F/A-18F landing at Atsugi after a training flight.

14. A VFA-102 F/A-18F Hornet in the normal toned-down markings on finals at Atsugi in December 2007.

15. Hook lowered for the benefit of watchers near Atsugi, this well-used F/A-18F Diamondbacks Hornets about to land.

16. A Finnish Air Force F/A-18C takes of from Fairford's runway for a demo at RIAT 2015.

17. The Finnish Air Force F/A-18C travels down the runway at Fairford following his display.

18. Hornet tails make a good canvass for artwork. This Spanish F/A-18C Hornet at Fairford still wearing Tiger Meet airwork in July 2017.

19. Tiger Meet artwork from the previous year still applied to Spain's F/A-18C at RIAT Fairford in 2017.

20. This Swiss Air Force F/A-18C at RIAT in July 2007. Note the powerful lamp in the side of the nose.

21. The Finnish Hornet also with a sideways shining lamp in the nose.

22. The Swiss Hornet on Fairford's runway during the 2014 RIAT.

23. A grubby Spanish Air Force F/A-18C flies past the crowd at RIAT 2017 on a dull Sunday morning.

A pair of Swiss Air Force F/A-18C Hornets depart Fairford at the end of RIAT 2014.

KIT PREVIEW

AIRFIX 1:48 P-51D MUSTANG

Scale:1:48/AIRFIX/Materials: IM/Kit No:A05131/Availability: www.airfix.com/Price: £20.99

Written and photographed by Spencer Pollard

The sight of another kit of the ubiquitous P-51 Mustang might not be welcomed with open arms by the majority of modellers, but there can be no denying the pull of this classic aircraft and the money that it will generate within a kit range, with Revell and MENG both adding new tools to their ranges. So it comes as no surprise to see Airfix add to their roster of kits with this, their latest 1:48 product being a kit that was first announced over a year ago and is now available to enjoy.

The first thing that strikes you about this kit is the quality of the mouldings. The kit parts are beautifully produced in the main, exhibiting stunningly smooth surfaces and arguably the best panel line and rivet detail yet seen from this famous British company. Indeed, the only panel lines that I've seen in an Airfix kit that compare to these were seen decorating their 1:48 Lightning kits and we all know just what that means. Add to the quality of the mouldings, what appears to be a level of accuracy that matches the best seen elsewhere, a cut price and a clever layer of design that breaks the aircraft down into sensibly approached sub-assemblies and you have a package that from the off looks to be one full of promise.

Understandably, Airfix chose to replicate the P-51D

T-HARRIER

Scale: 1:48/Kinetic/Materials: IM, PE/ Kit No: K48040/Availability: All good model shops

Written and photographed by Spencer Pollard

Having spent the thick end of 600 hours converting an Airfix 1:24 Harrier kit into a T.2 trainer during 2016, it will come as no surprise to anyone that I was rather excited by the idea of the same aircraft appearing as a readily available plastic kit in 1:48. Having already released kits of the Sea Harrier FA.2 and then the Sea Harrier FRS.1, I was keen to see what Kinetic would come up with when they attempted my favourite version, the T.2/4 - the fact that the company were being helped by many of the modellers that had helped me with my build, only added to the anticipation. As it turned out, the results would be on the whole everything that I could have wished for…Almost.

With this their third kit now on sale, it becomes immediately obvious that the company has learned from experience and improved each subsequent release within this family, the quality of the moulded parts, overall levels of finesse and the detail on offer, rising with each individual kit. Open the box and you are immediately captivated by the pale grey plastic parts and the quality of the surface detail that's lovingly engraved onto each piece, the new, full-length fuselage halves being particularly impressive. And so it continues as you dig deeper…

So, what do we actually get in the box?

Kinetic has tried to be all things to all men with this kit and have as a result, only partially succeeded in their aim. The kit includes options to build the T.2/2A/T2N/4/4N and 8, a full set of decals being supplied to decorate your chosen aircraft. As a result of this, Kinetic has sensibly chosen to offer full-length fuselage halves that are then 'modified' with alternate nose and tail cones, fins and smaller details such as weapons. The kit includes three different fins, two shorter types, one with RWR and a third, taller option, as does it the two different tail and nosecones, pointed and laser. So far, so good.

Close examination of those specific parts reveals accurate shapes and detail and though the rear fuselage under the tail is not quite as subtly curved as it should be, only the most fastidious will notice. Wings and tailplanes are from the Sea Harrier kits and though these are not quite as sharp as the newer fuselage, will blend seamlessly with the fuselage when the time comes.

In terms of specific details and the smaller sub-assemblies, the kit is something of a mixed bag that although not exactly bad, is not quite perfect either. We begin with the cockpit. Anyone who has peered into the real cockpit will know that it's something of a Heath-Robinson affair, the rear 'pit in particular being a slap-dash collection of parts that looks rather thrown together. Kinetic has somewhat tidied that impression up, supplying the rear cockpit in one piece with side consoles in situ, where no such consoles really exist. Similarly, it would appear that the instrument panels are a mixture of types, T2/4N/8, so you'll need to research your build and modify the panels accordingly and for a truly realistic impression, then rebuild the back of the cockpit to remove those consoles before finally adding the missing detail as you see fit. Then we move on to the seats. RAF and Royal Navy trainers used Martin Baker Mk.9 seats, whereas American aircraft and those used by Thailand and Spain featured Stencel seats - only the former being included in the kit. This means that from the box, only the British jets can be built, the others requiring new seats to be sourced, the Kinetic/Wingman German Alpha Jet being a possible source of parts in this scale.

The second issue concerns the underwing stores. Using the Sea Harrier as its base, the kit includes both stores and pylons that are not really appropriate to this aircraft. To begin with, the inner pylons are supplied in their Sea Harrier guise with kinked leading edges, whereas those under the wings of the T-birds, had straight edges. The weapons are similarly problematic, with only tanks to decorate the pylons, items such as bombs, practice bomb dispensers and RAF SNEB pods, being noticeable by their absence and thus rather limiting the options (RN rocket pods are included, but they are not appropriate to this aircraft). There are two weapons sprues in the kit but the majority of parts are from the Sea Harriers so other than the drop-tanks, are superfluous to this build - mind you, if you have a one of the Sea Harriers lying around, you may have a spare 1000lb bomb that you could combine with the one in this kit, but that's about it unless you wish to use items from the Airfix GR.3. It's understandable that Kinetic has taken this route, but it does rather limit the possibilities and given that the items mentioned are hardly thick on the ground, alternatives will be difficult to come by…

But enough of the criticisms, lets take a look at the positives, for there are many. Surface detail, already mentioned, is superb; the jet pipes, moulded in one part each are the best in any Harrier kit; the seats that are supplied are excellent, being the best depiction yet of the MB Mk.9 in this scale; the canopies, delicately etched with almost imperceptible MDC, are crystal clear and beautifully thin; tail fins are accurately shaped and highly detailed;

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SAUNDERS-ROE SR.53 MIXED-POWER INTERCEPTOR

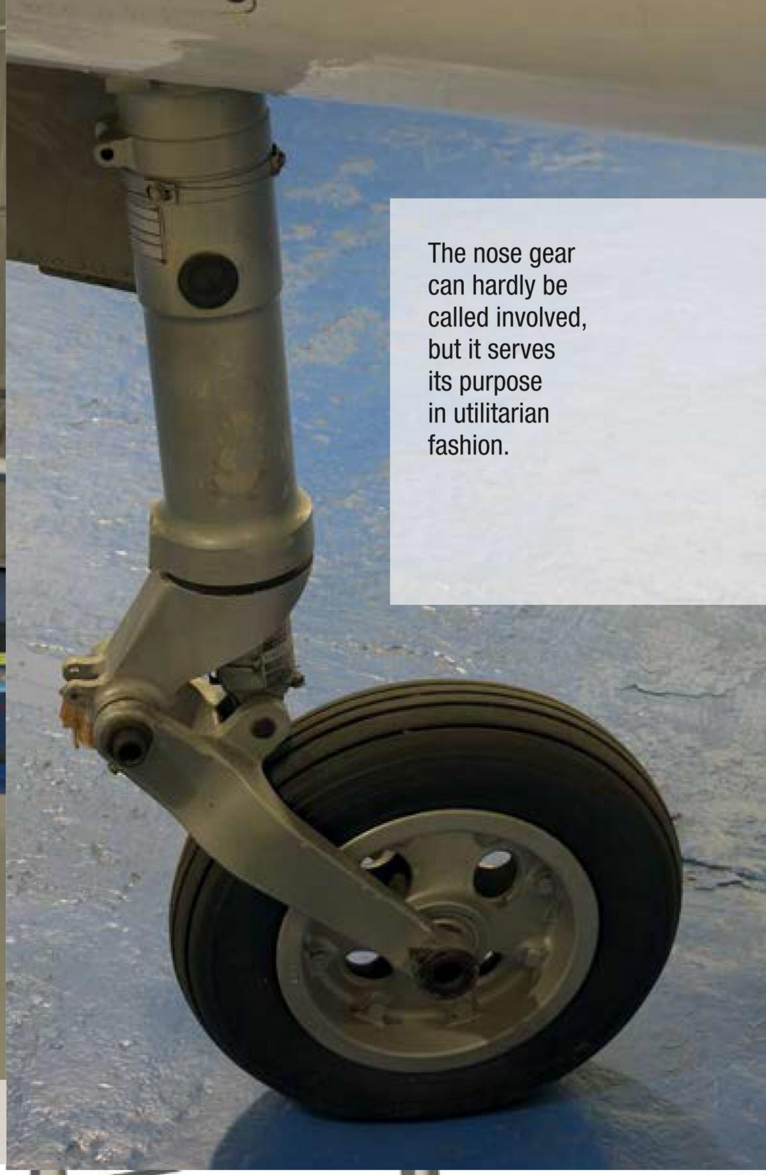
WE TAKE A DETAILED LOOK AT THE LAST REMAINING EXAMPLE OF THIS INCREDIBLE-LOOKING AIRCRAFT.

The Saunders-Roe SR.53 was a British prototype interceptor aircraft of mixed jet and rocket propulsion developed for the Royal Air Force (RAF) by Saunders-Roe in the early 1950s. As envisaged, the SR.53 would have been used as an interceptor aircraft, using its rocket propulsion to rapidly climb and approach incoming hostile bombers at high speeds; following its attack run, the aircraft would be able to return to its base by making use of the secondary jet propulsion instead.

Although the SR.53 proved to have promising performance during test flights, the requirement for such an aircraft had been overtaken by rapid advances in surface-to-air missile technology, leading to reconsideration of the aircraft's purpose. In July 1960, the development programme was formally cancelled, by which time a total of 56 test flights had been performed. A pair of prototype SR.53 aircraft had been completed and used during flight tests. One of these was destroyed during one such test flight in June 1958. The other, the first prototype, survived and was preserved; it is currently on public display at the Royal Air Force Museum Cosford. (Wikipedia)

Cosford's incredible exhibit. Being unique simply adds to the pleasure one gets from seeing this beautiful aircraft in the flesh…

The lengthy pitot tube dominates the nose of this aircraft and adds to its dart-like appearance.



The nose gear can hardly be called involved, but it serves its purpose in utilitarian fashion.

The canopy is as small as the view afforded the pilot from underneath its blown Perspex construction.

The air intakes are small on this 'jet' much of the initial power being supplied by the SR.53's rocket motor, its jet engine being little more than a means to a landed end.

Delicate vents add interest around the air intake, red warning stencils helping to break up this prototype's overall white plumage.

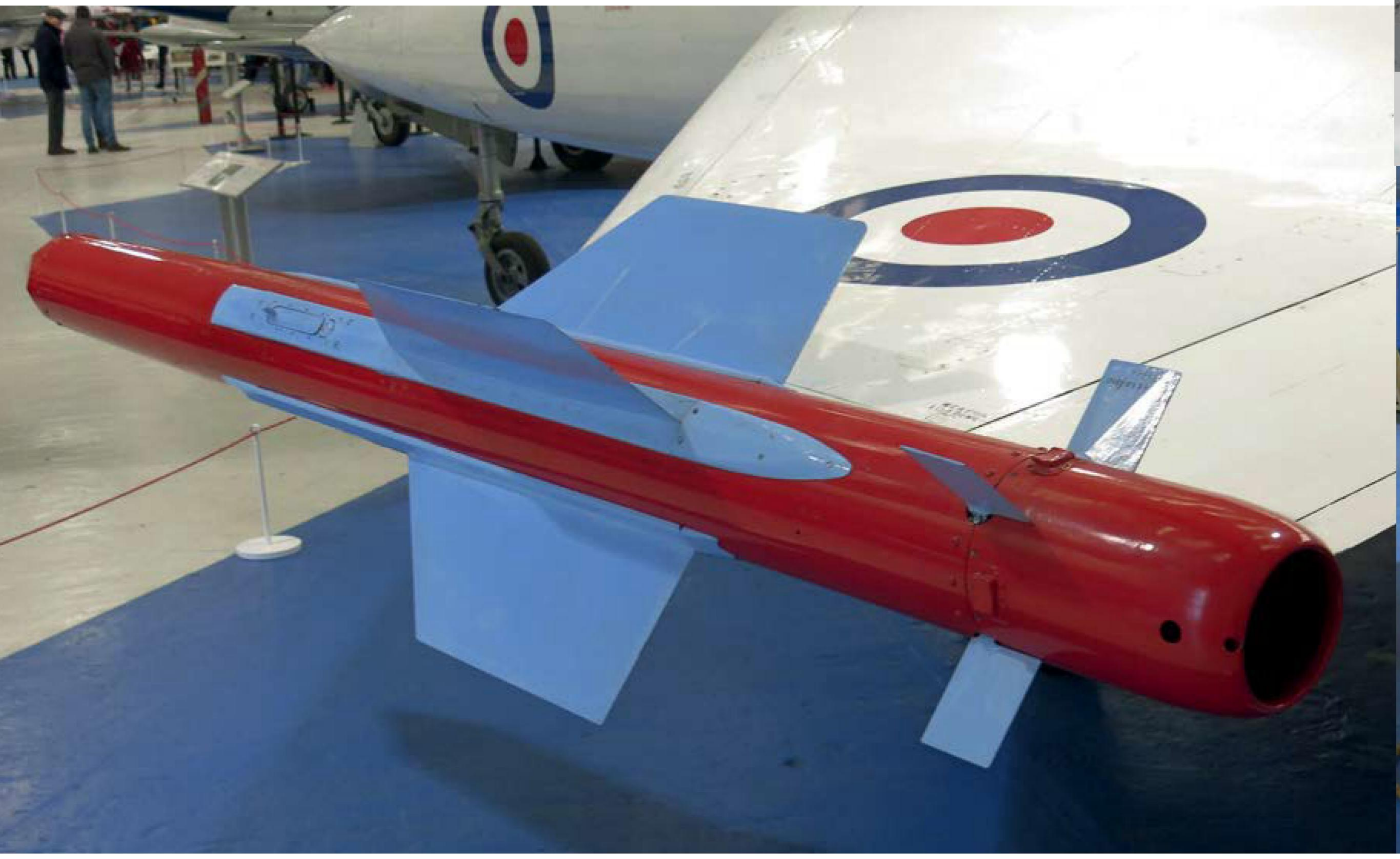
Careful examination of the superficially smooth airframe reveals a number of small intakes that could be added to the AZ kit by the more fastidious.

In order to aid the ground crew with operations designed to keep the aircraft in one piece, pressure gauges can be seen through a perspex window on the right-hand side of the nose. A carefully worded stencil describes what they are should anyone be in doubt…

Missing from the AZ kit, there's a strake under the fuselage that could be added using a length of Microstrip.

There is something deeply pleasing about this aircraft's colour scheme, the use of only four colours, red, white, blue and black lending an air of sophistication to proceedings, that more than tips a hat to the V-Bombers that flew around the same time…

IN DETAIL...



Another view of the intake reveals how sharp the lips are, which cannot be said of the kit parts!

Cosford's aircraft is loaded with dummy, wingtip mounted, Firestreak missiles. Their red and pale blue decoration certainly livens up the finish. Careful painting will be needed to recreate this is miniature.

Once again, the main undercarriage is a simple affair that does what it needs to do - get the aircraft from and back to, terra firma.

Another view of the main undercarriage reveals the tyre tread and brake detail.

Familiar from its use on the Javelin, the SR.53's tee-shaped tail is wonderfully anachronistic.

Hot-rods such as the SR.53 need help to slow down so the fitting of airbrakes is not only useful, it's essential. Note the simple bay and the brake's perforated construction.

Two powerplants, two exhausts. The unpainted heat shield is also noteworthy, as are the red blanking plates.

A final view of the SR.53 - truly a deadly dart!

Perhaps the highlight of the event, the chance to get up close and personal with Cosford's stunning TSR.2.

WRITTEN AND PHOTOGRAPHED BY MODEL AIRPLANE INTERNATIONAL

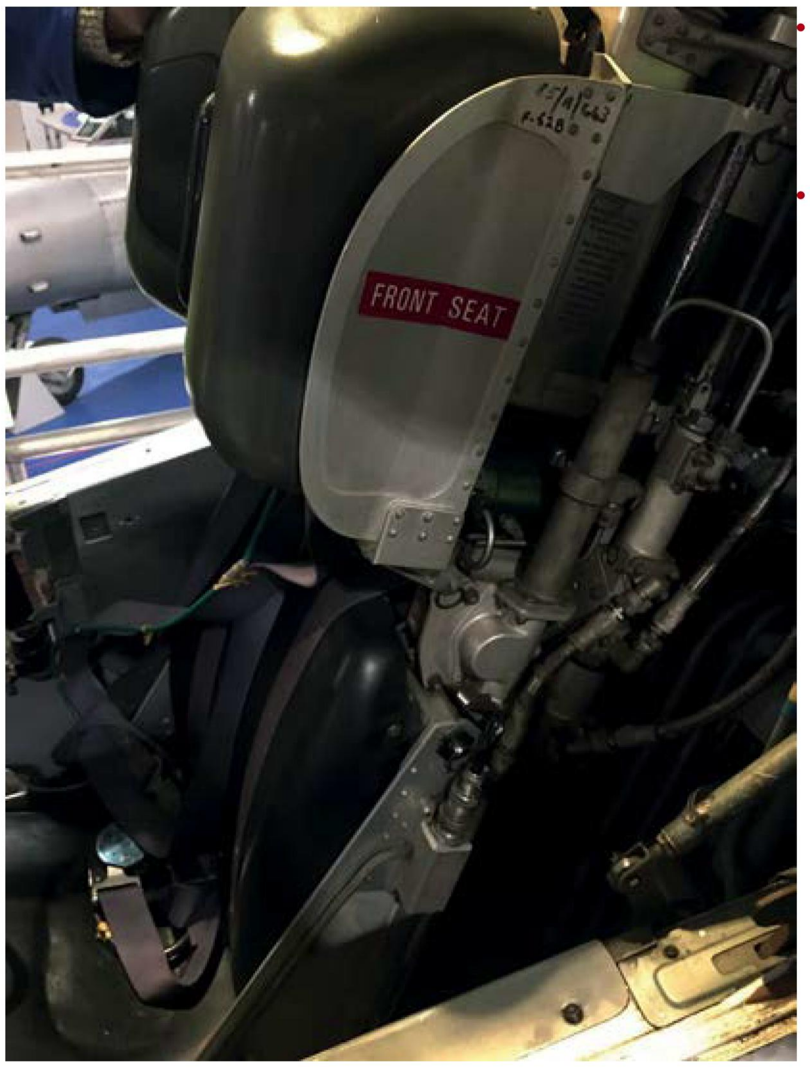
OPEN THOSE COCKPITS!

WE VISIT THE RAF MUSEUM COSFORD FOR THE FIRST OF THEIR OPEN COCKPIT' EVENINGS...

This year marks the 100th Anniversary of the Royal Air Force and as part of the celebrations, the twin RAF Museums at Hendon in London and Cosford in Shropshire, will be holding special 'open cockpit' evenings where enthusiasts can see into areas of the exhibits that are normally off-limits. But more than that, those who attend can actually sit in some of the aircraft, many of those chosen being either unique or specially chosen for their historical significance.

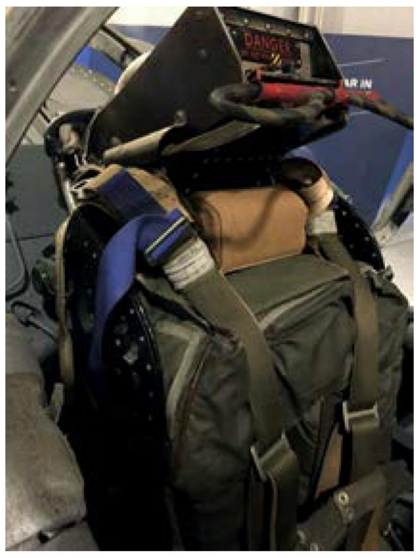
Last month Haris Ali and I took the very short trip to the RAF Museum Cosford to attend the first of this year's events. The aircraft chosen were from the collection's prototypes, as well as some of the Axis aircraft that they have on display. With a chance to look into the cockpit of the TSR.2, sit in the Fairey Delta 2, or in the Messerschmitt Me163, it was too good a chance to pass up! So, off we went to spend a very enjoyable evening with around 300 other enthusiasts of all ages to enjoy a shared interest and get a glimpse into the cockpits of some stunning aircraft. This little feature gives you an idea of what we saw that evening.

Where else would you have the chance to sit in a Messerschmitt Me163 Komet?!

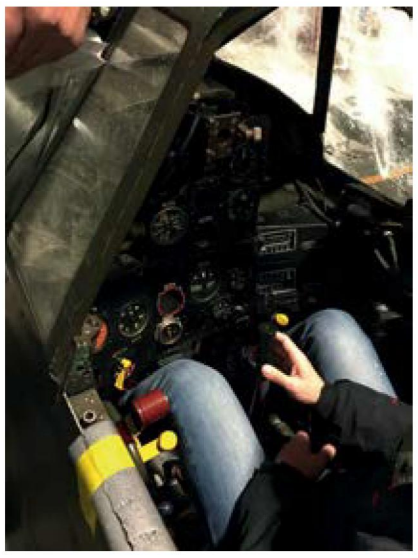


The TSR.2's Martin-Baker Mk.8 ejection seat shows off its secrets. The original Mk.8 seat was developed in the 1960s for the TSR-2, produced in small quantities it provided valuable experience that was carried forward to the Mk.9 and Mk.10 designs.The original Mk.8 seat was developed in the 1960s for the TSR-2. Being produced in small quantities, it provided valuable experience that was carried forward to the Mk.9 and Mk.10 designs.

Tiny in comparison to the TSR.2's cavernous cockpit, the Fairy Delta 2's 'pit is tiny, cramped and with the canopy closed, distinctly claustrophobic!



The Kestrel is fitted with a Martin-Baker Mk.6 seat, the head box and straps from which, can be seen here.



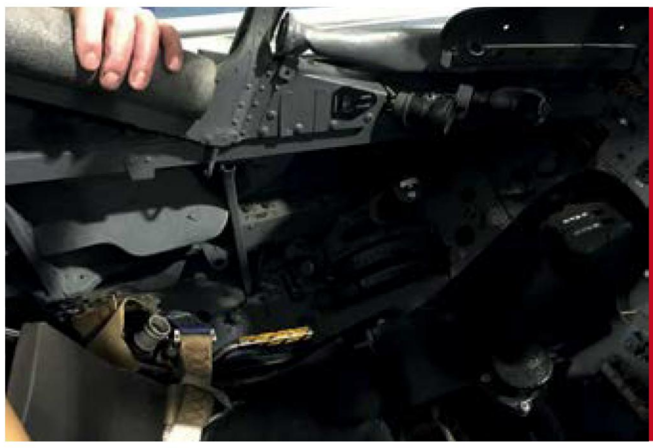
One of Cosford's most impressive exhibits is their stunning Ki-100, the cockpit from which is being examined by Haris Ali. Large in size, this part of the aircraft is made all the more imposing thanks to the close proximity of the guns and the fact that the control column seemingly has no trigger!

Though incomplete (many of the more interesting parts seem to have been taken by souvenir hunters over the years), the team at Cosford are working hard to create as accurate a TSR.2 cockpit as possible.

One thing that strikes you about the TSR.2's cockpit is how spacious it is and how similar it looks to the cockpit found in the later, Panavia Tornado family.

When you first look into a Komet's cockpit it looks spacious - don't be fooled: it's incredibly cramped and for someone tall like me, almost impossible to sit comfortably within. Having sat in this one, I cannot imagine how the pilots flew and fought in this aircraft…

The Me163's instrument panel is simple and uncluttered. Dark grey is the colour of choice inside the Komet's cockpit.



The Kestrel is certainly a simpler design than later Harrier variants, but the cockpit is very familiar with many of the features seen in later aircraft, being present and correct.

No visit to Cosford would be complete without a look at their wonderful Kestrel. Seeing the cockpit and being able to take some pictures of it, was a real treat for a Harrier fan such as I!

Cosford's Ki-100. What a fantastic looking aircraft!

WRITTEN AND PHOTOGRAPHED BY MODEL AIRPLANE INTERNATIONAL

CHANCE-VOUGHT F-8A CRUSADER

WE TAKE A DETAILED LOOK AT THE LAST REMAINING EXAMPLE OF THIS INCREDIBLE-LOOKING AIRCRAFT.

Pensacola's Crusader

Accepted by the Navy on 20 June 1958, the Museum's F-8A (Bureau Number 145347) spent much of its early service career at Naval Air Station (NAS) Cecil Field, Florida, assigned to Fighter Squadron (VF) 174 training East Coast Crusader replacement pilots. In November 1960 it joined VF-11, its first and only front line fighter squadron. While flying with the famed "Red Rippers," the aircraft was part of an unusual deployment in the carrier Franklin D. Roosevelt (CVA-42). Though VF-11 sailed with the carrier from Naval Station Mayport, Florida, on 15 February 1961, the squadron spent most of FDR's cruise shore based at the U.S. naval base at Rota, Spain. There the squadron averaged around 600 flight hours per month while practicing tactics and gunnery. VF-11 also engaged Air Force F-104s from a nearby base in mock dogfights. Returning to Cecil Field in August 1961, the aircraft remained with VF-11 until April 1962, at which time it rejoined VF-174. It was stricken from the Navy inventory in 1971 and arrived at the Museum that same year. **(The Naval Aviation Museum)**

Pensacola's stunning F-8A Crusader, shows off for the camera.

The museum exhibit has its refuelling probe extended, perfect for those with an eye on the finer details…

Along with its collection of internal firearms, the F-8A could defend itself with two Sidewinders, one on each side of the nose.

The nosegear is simple, utilitarian and small in size, ground clearance being somewhat limited as a result.

With the wings folded, the thin nature of their construction is easy to see.

Sharing the same J57 engine as the F-100, the jet pipe is similarly hidden within the fuselage.

Narrow-track main gear made the landing of the Crusader an affair fraught with danger, especially at the high speeds that this aircraft would return to either terra firma, or the terrifying prospect of a rolling carrier deck…

Drooped flaps - a nice addition to any model of this exciting jet. Note how a small section of the flap breaks away to deal with the change of angle as the wing raises up.

The inside of the open canopy is remarkably simple!

FINAL THOUGHTS

AVIATION'S ONE-OFFS: UNIQUE AIRCRAFT, UNIQUE MODELS

In this issue you will find a little feature on our visit to the 'Open Cockpit' evening at the RAF Museum Cosford. During this event visitors were able to examine in detail most of the exhibits that Cosford has on show, many of which are unique, one-off prototypes. Taking a look at these aircraft, seemingly for the millionth time and then, this morning, flicking through a copy of International Air Power Review in which was a feature on the Myasishchev M-50 Bounder, got me thinking about these aircraft as subjects for models…Interesting, stunning subjects for models.

Though it could — and often is — argued that service aircraft are released simply because they are popular money makers for the companies involved (which I'm firmly in favour of…) I can't help but yearn for releases that cover some of the also-rans that litter the history of aviation. For instance, though I'm a massive fan of the F-18 Hornet, I would love to see a state of the art kit of the YF-17, the lightweight aircraft from which the Hornet found faim and a lengthy service life. Similarly, the Harrier is another aircraft that often captures my imagination and I can build all manner of service versions, but building the P1127 or Kestrel is difficult, if not impossible unless I choose to either convert a large-scale kit, or track down the ancient and extremely basic Airfix offering.

Of course companies have tackled some of these aircraft over the years. Recently, HobbyBoss released a 1:48 kit of the sensational-looking YF-23 Black Widow II, an aircraft that is so beautiful to look at that you forget that it was designed to compete with the Raptor as the USAF's next-generation fighter. Similarly, we've seen 1:72 prototypes from many of the world's smaller kit companies, the AZ Model SR.53 that we looked at last month being just one such kit. So it's not all bad, so long as you are happy with the work that is involved with building resin or short-run injection moulded kits where the effort needed to complete the kits is rewarded with models that are as interesting, as they are unique.

Of course there is another choice should the desire to build one of these aircraft overwhelm your senses: scratchbuilding. In the IPMS Scale Model World competition last year there was a wonderful, 1:48 scratch build of the Fairey Delta 2 that you can examine at Cosford. This was a beautiful model that perfectly captured the look of the aircraft and showed what was possible from the hands of those with the drive and determination to have a go at building one of these machines.

One-off prototypes are often wonderful aircraft that look great in miniature. They may not have the cache of the more famous types, but there is no doubting that amongst a collection of famous types, they can certainly stand out! Now, which one-off will you build?

See you next time!

"One-off prototypes are often wonderful aircraft that look great in miniature."

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IN THIS ISSUE...

Written by
Spencer Pollard

Hello everyone, welcome to the May 2018 edition of your favourite aviation modelling magazine!

Eighteen months ago I was given the chance to build Tamiya's brand-new 1:48 F-14A Tomcat. Those of you that also buy our sister title, Tamiya Model Magazine International, may well remember my thoughts on the kit and how impressed I was at the time. Well, having let the dust settle over it for a while, I decided that this month it was time to take another look at this incredible plastic model kit, this month taking what Tamiya supply in their box and then improving it further with a number of sets created by Eduard. In a nutshell, this helps to create perhaps the ultimate example of this aircraft in miniature, with even higher levels of detail around the airframe, cockpit, etc., than is possible from even Tamiya's stunning box of tricks. In addition to the extra detail, a set of Furball decals was also used to replicate a wonderfully attractive, black-nosed VF-41 aircraft, to create something that really stands out in the display case. Do you want to know more? Turn to page 28 for the start of our in-depth feature!

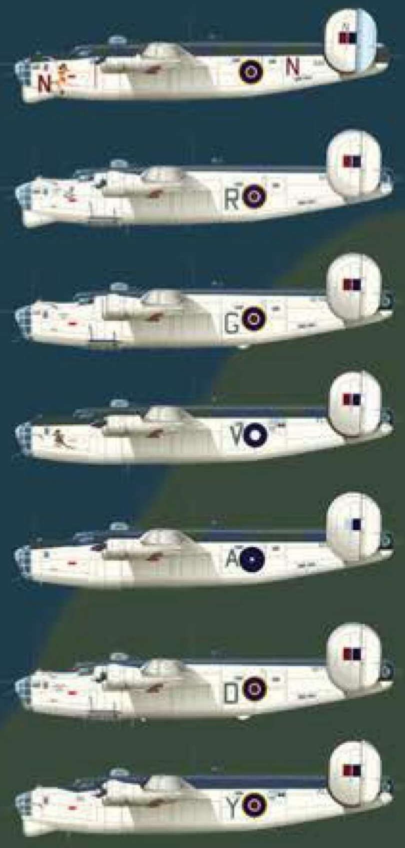
In addition to the F-14 we also have quite a collection of classic aircraft builds to enjoy, with the Zero, Hurricane, Bugatti P100 and A-1 Skyraider all taking turns to get your collective juices flowing. Of course these features would all be fun in their own right simply based on their individual subject matter, but when each is a different approach to a distinct type of kit build (from the box, detailed, conversion and resin), that pleasure is increased. You may not like each one in its entirety, but we hope that you will be able to pull ideas and inspiration from these features to that you feel confident to perhaps tackle something similar yourself.

AND FINALLY...

This month we continue with our round up of the latest 1:144 news and feature another kit build from the hands of Roy Kinsella. There is no doubting the popularity of this scale and if conversations over the last few months are anything to go buy, we are definitely on the right track with our features. This month we have looked at the delightful AFV Club Corsair and shown what is possible from this scale and that kit. It may be tiny, but the detail and presence afforded by its completion more than make up for that fact. We hope that you like it as much as we do!

So this is the May edition of Model Airplane International. I hope you enjoy this issue and I hope to see you again next month!

eduard
LIMITED EDITION



SELECTION FROM
13 MARKING OPTIONS

RIDERS IN THE SKY 1944 1/72

Liberator GR Mk.III and GR Mk.V in the RAF Coastal Command service

- Hasegawa plastic parts
- Two unique plastic sprues by Eduard (NEW TOOL)
- Eduard photo-etched details and painting mask
- Cartograf printed decals for 13 marking options of RAF Coastal Command Liberators GR Mk.III and GR Mk.V
- A2 size boxart print by Piotr Forkasiewicz
- 76 pages book by Pavel Türk and Pavel Vančata related to the theme (in Czech language, English text available on Eduard website) with focus to No. 311 (Czechoslovak) Squadron RAF

#2121 March 2018

www.eduard.com

WRITTEN AND PHOTOGRAPHED BY MODEL AIRPLANE INTERNATIONAL

A-1 SKYRAIDER

WE TAKE A DETAILED LOOK AT THE NAVAL AVIATION MUSEUM'S STUNNING EXHIBIT

Pensacola's Skyraider

Able to carry more payload than a four-engine B-17 Flying Fortress, the single-engine AD (later A-1) Skyraider was considered one of the finest attack and close air support aircraft ever built. Skyraiders proved critical during the Korean War, striking heavily defended industrial areas and key targets such as the Hwachon Dam. The Museum's aircraft is the last Skyraider flown on an attack mission, its last combat flight occurring over the jungles of North Vietnam.

The airplane that became the AD Skyraider (redesignated A-1 in 1962) evolved from a 1943 Navy decision to combine the dive-bombing and torpedo missions in one aircraft. The resultant AD could carry 8,000 lb. of ordnance, more than a World War II B-17 Flying Fortress. First flown in 1945, Skyraiders entered fleet service the following year. Later nicknamed "Spad" for its old-school approach to design and appearance that was reminiscent of the World War I aircraft, the AD earned its reputation as one of the finest attack aircraft ever built in the skies over Korea. Missions varied, including attacking heavily defended industrial and infrastructure targets, knocking out the Hwachon Dam with aerial torpedoes, and earning the affection of many a grunt with its close air support capabilities. Skyraiders were also modified to conduct electronic countermeasure and night attack missions. Aircrews appreciated the airplane's inherent ruggedness that brought them back despite heavy damage from enemy fire.

After the Korean War, Skyraiders continued to serve in multiple roles. Some AD pilots trained for nuclear war, practicing long-range flights to deliver nuclear bombs at low altitude. By the time of the Vietnam War, more modern aircraft had begun to assume the attack mission in Naval Aviation. Though transfer of A-1s to the Republic of Vietnam Air Force began as early as 1960, A-1s continued to fly in the U.S. Navy. A-1s were part of the first attacks against North Vietnam following the Tonkin Gulf Incident and in June 1965, a pair of Skyraiders shot down a North Vietnamese MiG-17 in air-to-air combat. In 1968, when increasingly sophisticated anti-aircraft defenses proved too hazardous for the slow "Spads," Navy A-1s ceased flying attack missions, though

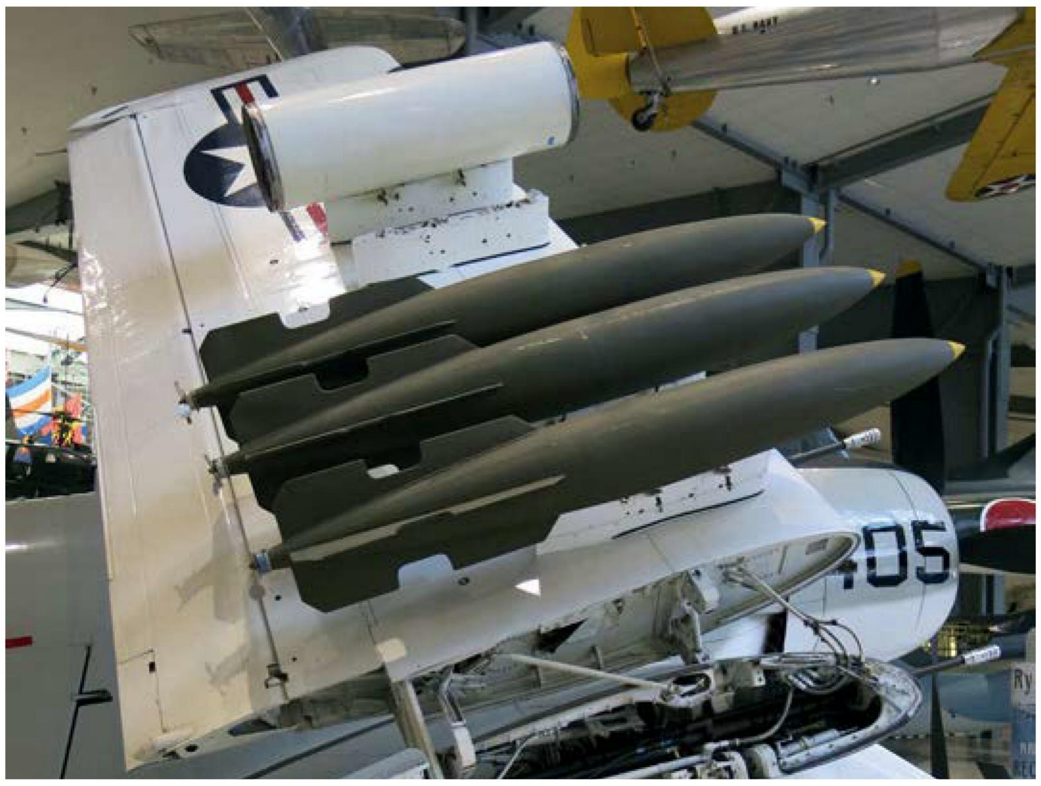
The Naval Aviation Museum's A-1H is a wonderful exhibit that's beautifully restored and presented.

It's only when you look down on the Skyraider that you get a sense of how big it is! For a piston-engined aircraft, the A-1 is huge!

Though hardly gaudy in appearance, the museum's exhibit still looks smart in its VA-25 colours and markings.

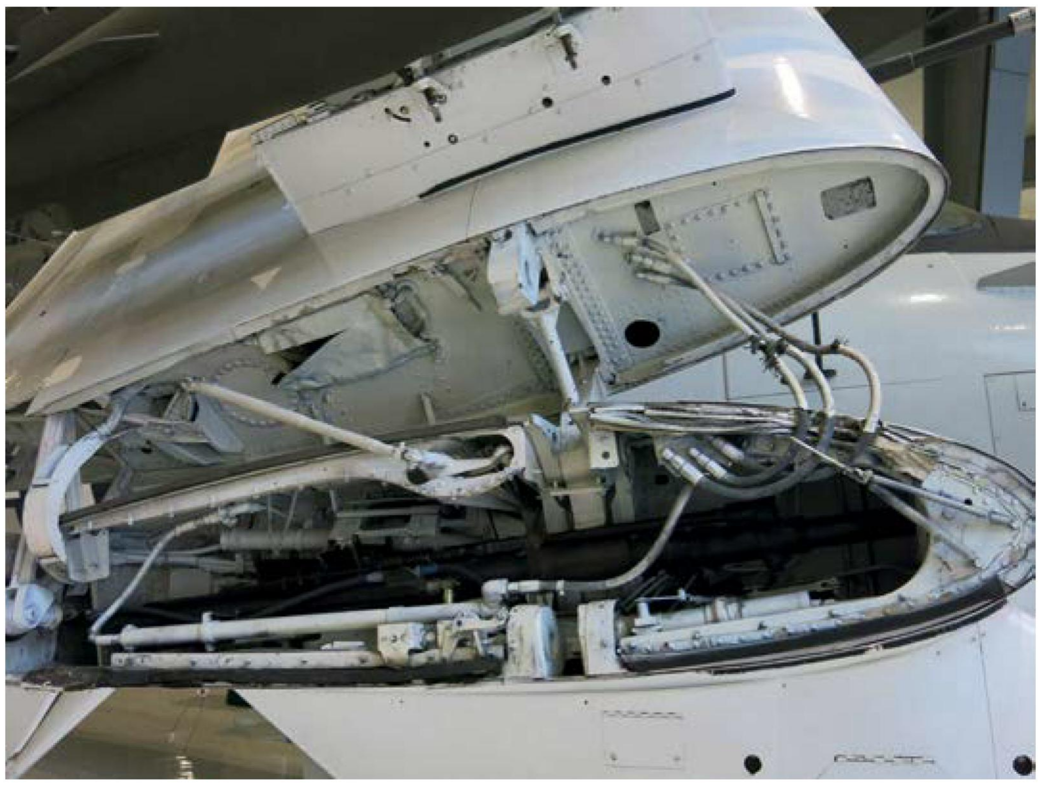
they continued to operate in the electronic countermeasures role until 1972. All told, 3,180 Skyraiders rolled off the Douglas Aircraft Company assembly line.

After acceptance by the Navy in June 1954, the Museum's AD-6/A-1H subsequently flew in several attack squadrons, including Attack Squadron (VA) 25 in Vietnam. Its last combat mission came in 1968 off the carrier USS Coral Sea (CVA-43), flying rescue combat air patrol and providing close air support to Marines at Khe Sanh. It was the last combat mission of that cruise for VA-25 and the last for the Navy's Skyraiders. The flight was made by Lieutenant Junior Grade Theodore D. Hill Jr., who later flew the plane to Pensacola. **(The Naval Aviation Museum)** ■



With a greater weapons load than a B-17 Flying Fortress, the A-1 could pack a massive punch…

In order to save space, the museum's aircraft has its wings folded - sensible move with a wingspan that great!



Close-up of the wing fold for those keen to add extra detail to their kit builds. Note the cannon inside the wing.

Surrounded by all manner of incredible aircraft, the Skyraider is a commanding sight!

WRITTEN AND PHOTOGRAPHED BY ALAN FIRBANK

A-1 SKYRAIDER

WE TAKE A DETAILED LOOK AT THE SKYRAIDER AND ITS APPEARANCE ON THE UK WARBIRD CIRCUIT

In support of our 1:48 Tamiya Skyraider kit build we bring you a selection of photos of the real thing as seen at Duxford's Flying Legends air shows and the Royal International Air Tattoo at RAF Fairford. When looking to build a 1:48 scale kit of the Skyraider, there is a good selection of kits from which to choose. It is generally acknowledged that the Tamiya kit is the best one. It is available in two boxes, the Vietnam era US Navy boxing with the VA-176 scheme with the stinging bee on the tail and the US Air Force version in the standard Vietnam War camouflage scheme. Our overall Sea Blue AD-4NA is in the markings of an aircraft belonging to VA-155 on the USS Princetown during the Korean War in 1953. This same aircraft (code 26922) appears also in the stinging bee markings and is operated in the UK by Kennet Aviation. The overall natural metal Skyraider is registered in France and is an ex-French Air Force machine.

The Skyraider is the one of the biggest single engine aircraft and could carry 8,000 pounds of bombs/rockets on the under-wing pylons. That is just over half the load of a four engine Lancaster bomber. The Skyraider was famous for being able to take lots of battle damage and still fly home. This strength was unfortunately demonstrated before the crowd at Flying Legends 2011 when French owned 24143 collide with Mustang Big Beautiful Doll on doing a break to land manoeuvre at the end of the show. The Skyraider's right wing caught the Mustang, severely damaging its tail, forcing it to crash into a cornfield next to Duxford airfield. The damaged Skyraider continued to make a normal landing. You see the damaged Skyraider amongst our pictures.

Note the distinctive sooty staining from the Skyraider's engine in our photos. Even on display aircraft that you would expect to be kept fairly clean this features appears from light streaking to much of the fuselage being covered in sooty exhaust stains. It appears that the exhausts stain the surrounding area just about as soon as the engine lights-up.

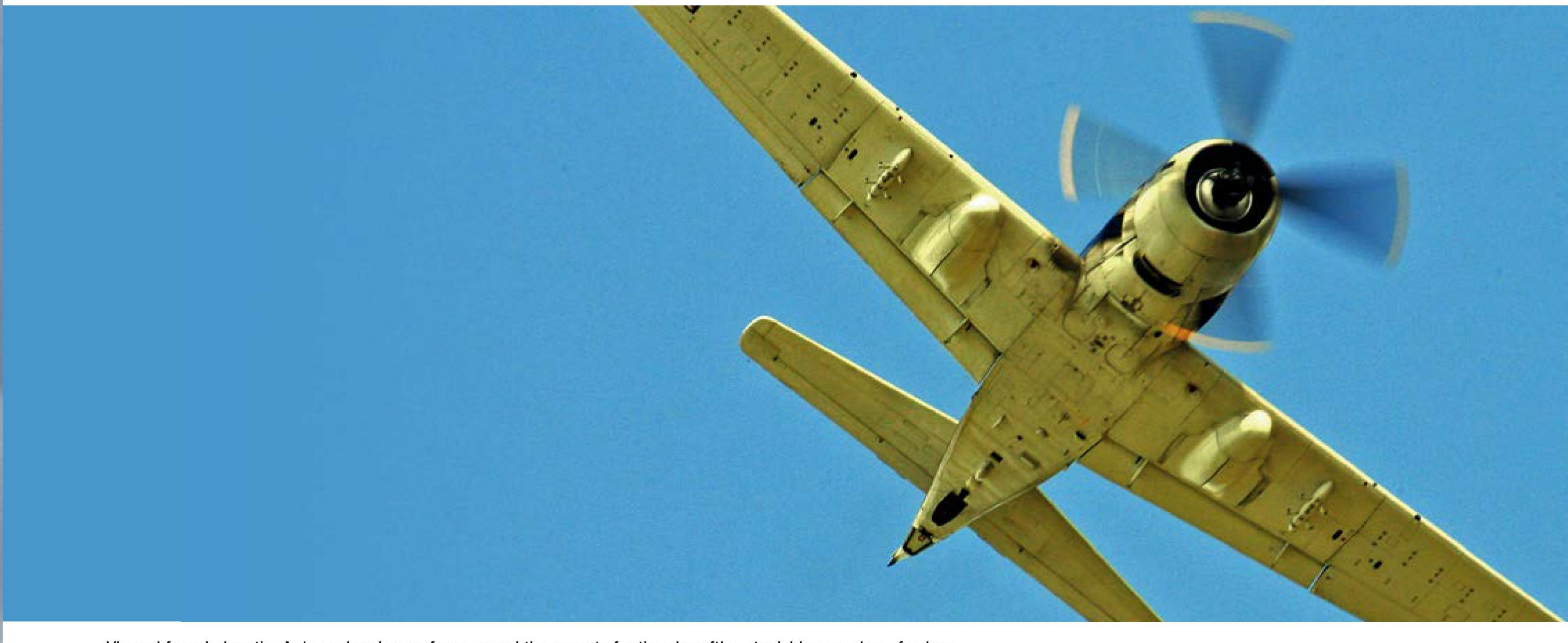
The natural metal Skyraider (F-AZHK) is an AD-4N and the others shown in our photos are AD-4NAs. There are plenty of decal sheet options to apply to your models as well as a long list of add-on items with which to detail your Skyraider projects. Should you wish to see Skyraiders in action, look out for the Flying Legends air shows at Duxford in July.

In the air, the Skyraider is a wonderful mix of power and grace.

Looking less than healthy, Kennet's Skyraider sans wingtip after writing-off 'Big Beautiful Doll' during Flying Legends 2011.

As if proof was needed, here is the wing tip after its collision with the Mustang…

As seen as in our detailed walkround, here is the wing-fold for those keen to add more detail to their models.



Viewed from below the A-1s underwing surfaces reveal the mounts for the aircraft's astonishing number of pylons.

Similar in design to those fitted to the Corsair, the A-1's undercarriage is solid and purposeful, perfect for the type of aggressive landings this massive aircraft would undertake, both at sea and on land.

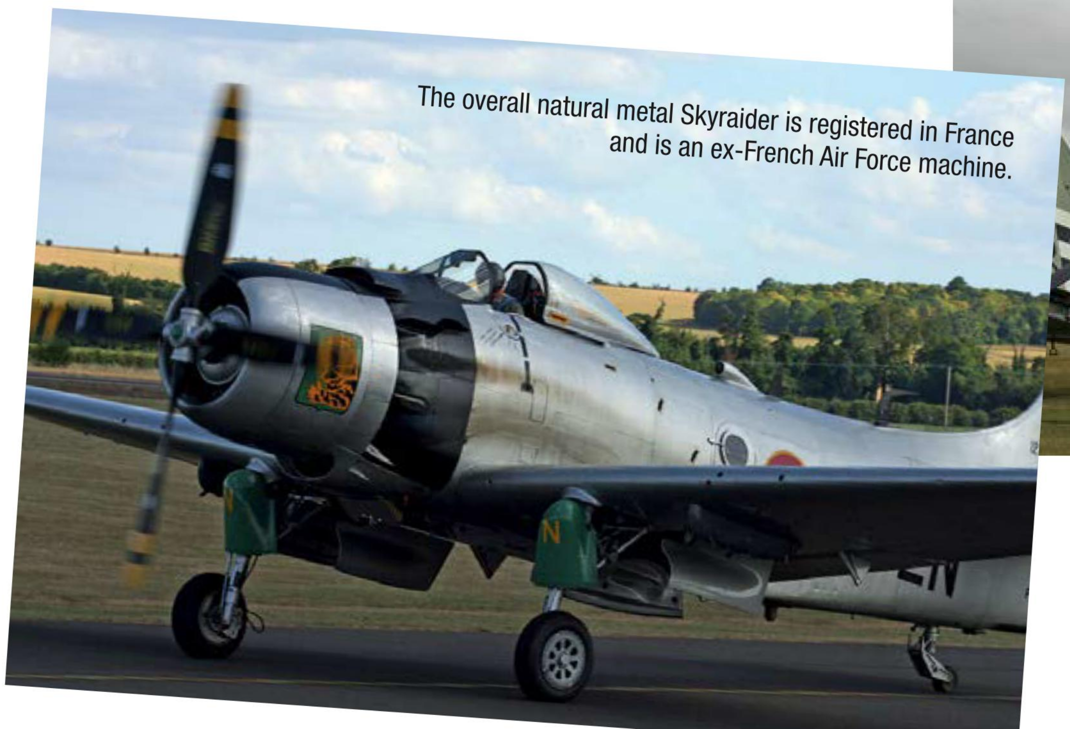
Though many would rather see the Skyraider with its wings extended, there is no getting away from the fact that it looks very cool all folded up!

In French colours the aircraft looks very smart, the combination of aluminium finish and wonderfully Gallic heraldry, helping to create a highly distinctive looking aeroplane.

Thanks to that enormous spinner, ground clearance is substantial.

All three Skyraiders in flight - what a stunning sight!

Power and grace!



The overall natural metal Skyraider is registered in France and is an ex-French Air Force machine.

Now that's a lineup! Sea Fury, Corsair and Skyraider - perhaps the three greatest piston-engined aircraft ever to take flight…

Early A-1s saw service in an overall Gloss Sea Blue finish, an example of which can be seen here.

The rakish lines of the Skyraider show off in this almost perfect profile shot.

Viewed from behind, the A-1's ubiquitous 'bumblebee' marking shows off for the camera.

All three Skyraiders lined up for the camera. Note the difference in colour between the two closest aircraft, despite being finished in ostensibly the same scheme…

With all of its pylons missing, the A-1 is a remarkably streamlined design, seen here beating up the Duxford airfield.

All folded up, our Skyraider basks in the morning sun.

As the aircraft taxis past, the incredible levels of exhaust staining become more than apparent!

MiG-21MF Interceptor

1/72

WRITTEN BY GLENN SANDS

DEFENDING THE MOTHERLAND AT MACH THREE

MAI DESCRIBES THE EARLY DEVELOPMENT AND THE MULTITUDE OF SINGLE-SEAT MIG-25 FOXBAT VARIANTS THAT PROTECTED RUSSIA'S VAST AIRSPACE DURING THE LAST TWO DECADES OF THE COLD WAR.

The brutal looking Mikoyan MiG-25 set a totally new level in combat aircraft performance. The early prototypes blazed a trail of aeronautical records during 1965-67 including closed-circuit speeds, payload-to-height and rate-of-climb. NATO christened the new Russian aircraft Foxbat, and while in public the US military remained vague when asked about the new Russian fighter, behind closed doors the Pentagon's analysts were sent into pandemonium. Western policy makers recognised that here was a combat aircraft that outclassed everything else and urgent studies were undertaken in order to counter the new threat.

But, what is not understood is that the Foxbat was 'actually' created in response to a threat from the US. The development of supersonic bombers in particular the Convair B-58 Hustler which entered operational service in March 1960, Russia needed an aircraft to counter such a menace. In addition, intelligence reports were reaching Moscow of a new high-altitude reconnaissance platform which later emerged as Lockheed's A-12. With the need to provide air defence of its missile bases and rocket research sites, which were scattered across the nation, from prying American eyes, and the possibility of air strikes if war ever broke out – Soviet national pride was at stake

Conceptual design studies were carried out in 1958-59 for an interceptor capable of high Mach performance. Mikoyan's design was known as the Ye-155P (Perekhvatchik – radar-directed) as the interceptor and the Ye-115R (Razvedchik) for reconnaissance. The bureau has a history of designing aircraft with a dual role.

Such was the fear within the Kremlin of America's new Mach three capable fighters and bombers that a directive was issued

At the height of the Cold War, grainy black and white images were released to the West illustrating the latest weapons of the Soviet Union. These two MiG-25Ps are each armed with four Acrid radar guided AAMs during a practice mission over the Soviet Union in the late 1970s.

outlining the operational requirements and the intended service entry of the new Russian fighter, even before the first prototype had moved to the production line.

The development of the Ye-155 proved laborious and demanding and not all of this was related to the configuration of the aircraft. It was clear that conventional aluminium alloys would not be able to withstand the tremendous heat, such as the nose and leading edges. These would be constructed of titanium, but many other areas could theoretically be made of riveted aluminium – such as the wing skins – which would have to be welded steel because no suitable heat-resistant sealant could be found, and there was a shortage of skilled riveters within the Mikoyan Design Bureau. Eventually 80 per cent of the aircraft was tempered steel, 11 per cent of aluminium alloys and nine per cent of titanium.

Development of the Ye-155P interceptor was approved in February 1962, and the prototype took to the air on September 9, 1964. The aircraft was powered by a pair of 22,500lb Mikulin (later Tumanskii) R-15B-300 turbojets with a life of 150 hours, and was fitted with a Smertch-A radar, known to NATO as Fox Fire; the radar had a detection range of 62 miles. The aircraft carried two R-40 air-to-air missiles, in mixed pairs or R-40R and R-40T semi-active radar- and IR-homing versions. Look-down capability was non-existent at the time.

The performance was up to expectations and, in March 1965 – under the cover designation Ye-266 – an early aircraft was used to establish several performance records which were countered by Lockheed's YF-12 in May 1965. Between 1965 and 1977, the Ye-266 and another early variant, the Ye-266M eventually made 21 FAI-notified record-breaking flights, setting nine records which remained unbroken until 1994.

Foxbat production began in 1969, but the aircraft did not enter full Voyenno-Vozdushnye Sily Rossii (VVS – Russian Air Force) service until 1973, having been plagued by engine problems. Even in service the MiG-25 was subject to serve operating limitations, which strictly constrained the amount of time that could be spent at very high speeds, so limiting the use of full engine power. The early models were delivered directly to the voyska protivovozdushnoy oborony, voyska (V-PVO - Anti-Air Defence of the Nation/Territorial Defence Forces) Fighter Weapons School and a front-line unit near Gorkii in order to train pilots, ground crews and refine combat tactics. This initial delivery was effectively for in-service test purposes only. The aircraft were intensively used for missile test firings of the R-40 AAM.

The limitations of the first production series of the MiG-25P, (the Ye-155P-6 was the first fully equipped model), now known in the West as the Foxbat A soon became apparent. During production of this early variant, the primitive radar was replaced by the Smerch-A2 and later the Smerch-A3. A typical attack profile for the Foxbat would be to launch a salvo of two missiles – one an IR-homing R-40T, the other a semi-active radar homing R-40R. Thus, the four missiles carried, compared to the early variant's two, represented only two attacks.

A Lead Lost?

Although the MiG-25P fulfilled most of the design requirement with the VVS who were extremely pleased with the aircraft, the Foxbat's secrets were soon to be revealed to the West in 1976 following Lt Viktor Belenko's defection to Japan in his Foxbat A.

After the catastrophic loss of this aircraft, the decision was made to develop a new variant. A government directive was issued on November 4, 1976. The MiG-25PD – Dorabotannii – modified – Foxbat E entered service in 1979 and proved to be a far more capable variant than its predecessor. The most significant upgrade was the introduction of the Sapfir-25 radar.

Based on the Sapfir-23 developed for the MiG-23, the Sapfir-25 was a pulse-Doppler radar with a genuine look-down, shoot-down capability and slightly improved detection range of about 71 miles. The new radar was introduced along with a TP-26Sh-1 infra-red search-and-track (IRST) system which could acquire targets autonomously out to a range of 28 miles.

The R-40R and R-40T missiles were equipped with improved seeker heads. For greater flexibility, the MiG-25PD could carry four R-60 (AA-8 Aphid) missiles for 'dogfighting'. Along with the improvement in avionics the MiG-25PD introduced the new RB15BD-300 engine. Externally the MiG-25PD differed from earlier models by having a modest fuselage stretch ahead of the cockpit to accommodate the new radar set. MiG-25PD production continued in 1982, although some aircraft planned for that year did not leave the production line until late 1983.

Photo Foxbats

Whilst most of the West's attention was focussed on the interceptor variants of the MiG-25, it has proved to be the reconnaissance MiG-25, known in the West as Foxbat Bs, that were operationally the most successful. This led to a total of more than 12 sub-types and one-off experimental configurations produced.

MiG-25Rs began rolling off the production line in 1969 and entered service with the VVS soon afterwards. Front-line units tended to have just one squadron of MiG-25Rs for high-level, clear-weather, day reconnaissance sorties. Pilot training proved to be a problem however, and hasty changes were made to the training procedures to avert any accidents while flying at high altitudes. Successive improvements were incorporated into the MiG-25Rs, resulting in many aircraft being upgraded to MiG-25RB standard.

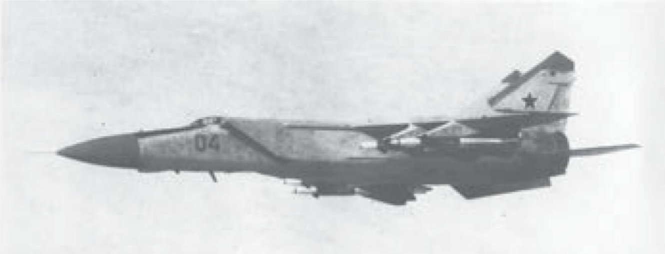
Mach Three Bombers

The MiG-25RB entered service in December 1970 and its development occurred following a request from Egypt which asked for the MiG-25R to be adapted high-level bombing missions. Carrying bombs on the mach 3 Foxbat was not straightforward. But the design of heat-resistant coated bombs ▶

The third prototype Ye-155 makes a flypast at Domodedovo air display on July 9, 1967. This was the MiG-25's first public appearance.

One of the first NATO images of a Foxbat E released to the media. Mounted under the nose is a highly sensitive infrared sensor, whilst its radar systems had a limited lookdown, shoot-down capability. The AA-6 Acrid missiles are the largest production AAMs, with a length of more than 20 feet.

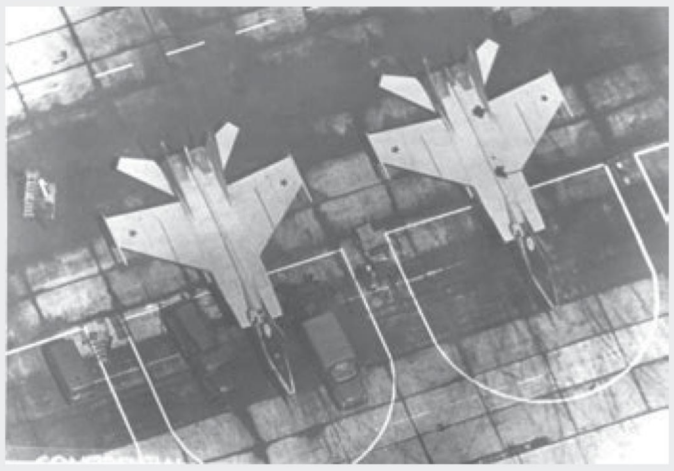
A clandestine image of a reconnaissance MiG-25 illustrating the camera windows on the underside of the nose. Western analysts spent hours pouring over such images in an effort to expose the secrets of the Foxbat.



The MiG-25PD was capable of carrying four AA-6 Acrid radar- or infra-red guided AAMs.

A MiG-25RBK Foxbat D gets airborne followed by a camera-equipped MiG-25RB Foxbat B. The MiG-25RBK has a large dielectric panel on each side of the nose serving a SLAR, and had no under-nose camera windows.

Viktor Belenko's air force identity papers which he passed to CIA agents upon his arrival in the United States.



An early Cold War satellite reconnaissance image of two early production MiG-25RBs, at Ramonskoye test facility.

A MiG-25RBF based in the former East Germany during the late 1980s. Note the two pairs of dielectric panels on the nose for its Shar-25 ELINT system on the nose, which replaced the cameras of the earlier RB models.

mounted on fuselage and under wing hard-points allowed the aircraft to be armed with FAB-500 M-62 bombs and able to accurately deliver them from 65,616 feet at 1,554 mph. This was due to the installation of the Peleng-D aiming computer. The MiG-25RB stayed in production for two years before being replaced with the electronic intelligence (ELINT) equipped MiG-25RBV. This later variant was basically a simple upgrade which included a later ECM suite and SRS-9 Virazh ELINT equipment.

Foxbat reconnaissance variants continued to be developed, mainly by converting earlier models. However, such variants were in some cases limited to a production run numbering under ten. This was the case with the MiG-25RR, of which only eight examples were produced and tasked with the role of high-altitude radiation sampling from 1970 to 1980. These airframes were equipped with canisters under the wings and suitably modified the MiG-25RRs flew sorties along the Chinese border in order to gain intelligence on the nation's nuclear tests.

In the same way that the MiG-25RBs were upgraded to the MiG-25RBV configuration, Mikoyan began production of an entirely new reconnaissance/strike variant in 1978. The MiG-25RBTs were equipped with a Tangazh signals Intelligence (SIGINT) package which was able to cover a wide range of detectable NATO radars. The sites' location could then be pinpointed when the recorded intelligence data was processed by analysts.

With the need to transmit intelligence data to the ground as it was received by the MiG-25RBT, rather than go through the lengthy post-flight development processing, led directly to the introduction of the MiG-25RBK and the introduction of the Kub-3M ELINT suite. Installation of this ELINT gear in the nose of the MiG-25 required the removal of the camera mounts, whilst the dielectric panels on the nose were slightly enlarged.

The complete lack of camera windows in the RBK led NATO to give the aircraft the designation Foxbat D. A further change was made to the dielectric radome at the tip of the nose. It was longer and had a cut-out on its upper surface. The RBK retained the bombing capability of the Foxbat B. the variant remained in production until 1980, and proved the basis for the MiG-25RBF.

The up-grade entailed the installation of an improved ELINT suite in the form of the Shar-25. The aircraft was able to carry panoramic cameras if necessary and was fitted with extra ECM gear and chaff dispensers. The Shar-25 offered improved flexibility in the detection of radar sites and could work in a jumbled radio signal environment. During a sortie, any intelligence collected could be relayed directly to the ground during the flight. The RBK could be distinguished by the four-small low-set rectangular dielectric panels mounted either side of the nose.

Continued Development

The MiG-25RBS entered production in 1971. This variant was equipped with a Sablya-A SLAR, a variant first proposed in 1963, but it took the design team seven years to develop a suitable SLAR. The RBS could

A windfall for the West occurred on September 6, 1976 when Lt Viktor Belenko defected to Hakodate airfield in Japan, in his MiG-25P Foxbat A. US and Japanese technicians swarmed over the aircraft for days before it was returned to the Soviet Union.

With its twin brake chutes streaming, a MiG-25PU taxis-in after a training mission. The instructor sat in the forward cockpit, displacing the radar, giving the trainee Foxbat pilot exactly the same view he would have in the single-seat variant.

be distinguished by the two large dielectric panels on the sides of the nose, different skin panels and the lack of cameras. The picture was generated by the SLAR and was 'developed' via a ground link to a specially equipped van. Production of the RBS continued until 1977.

Mikoyan continued to produce Foxbat variants through constant upgrading of existing models and the RBS models were improved to the MiG-25RBSh standard in the early 1980s. Although visually no external change could be seen on the airframe, the Sablya radar was replaced with a Shompol SLAR. With three times the resolution the new radar allowed the RBSh to work at any altitude between 984 feet to 75,460 feet. The Shompol was also equipped with a moving map capability. Mikoyan upgraded all the MiG-25RBS models to the RBSh standard, although not all the aircraft carried the new designation.

Wild Weasel

The potential of developing the MiG-25 into a suppression of enemy air defences (SEAD) platform was proposed by Mikoyan during the development of the Ye-155, but it was not until 1988, that the technology was available allowing the MiG-25BM 'Wild Weasel' to enter operational service. The BM's role was to clear a path through Western defences allowing a 'recce' MiG-25 to complete its sortie unhindered. Any NATO SAM sites, which threatened the sortie, would be attacked with Kh-58 anti-radiation missiles.

Less than 100 MiG-25BMs were built between 1982 and 1985 and were restricted to operating in dedicated SEAD units within Aviation Regiments based in East Germany and Poland. The BM variant could be identified by a 7.8-inch nose plug, which was added to allow for the additional ECM suite and missile guidance equipment. Many of the aircraft had their noses painted dark grey around the area in order to look like standard MiG-25P interceptors.

Mikoyan continued to develop existing models then in front line service and both the reconnaissance and interceptor variants were tested with in-flight refuelling probes under the designations MiG-25RBVDZ and MiG-25PDZ respectively.

An undisclosed number of MiG-25RBs underwent conversion to serve as weather reconnaissance platforms with their cameras removed from the nose cone. These Foxbats were designated MiG-25MRs. One MiG-25PD Foxbat E was fitted with a trials ECM ventral pack together with flare dispensers. Although trials proved the potential of the modification, the new ECM equipment, at the time could not be produced in sufficient quantities to allow widespread operational service, so the project was shelved.

Facing Off Against the West

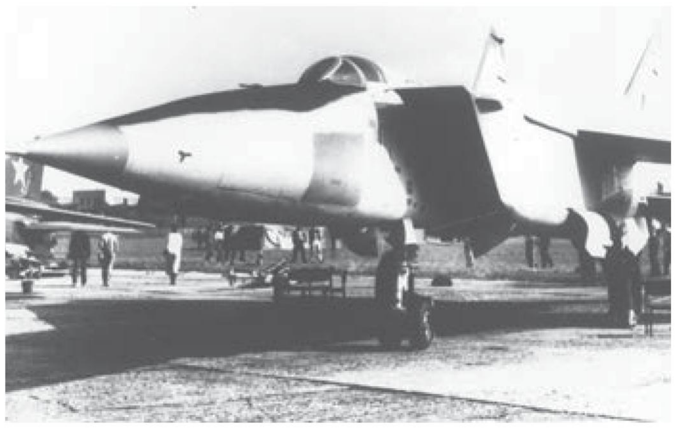
When the Foxbat entered service with the VVS in 1969, it was the reconnaissance MiG-25R that was first, with the interceptor following four years later. The MiG-25 was viewed as the jewel in the crown of the Soviet Union and although Mikoyan was aware of the aircraft's limitations, in the West analysts were not, and assumed the aircraft was far more capable than it really was.

The loss of Viktor Belenko's MiG-25 to the West following his defection to Japan was a blow to Russia, but also opened the doors for Mikoyan to be granted approval from Moscow to export 'watered down' versions of the Foxbat to the Soviet Union's closest allies.

In early 1971, four reconnaissance MiG-25s, (two R and to RB models) deployed to Egypt under the designation X-500. From an undisclosed Egyptian air base, they provided the nation with intelligence data on the movements of Israeli forces along the border. The MiGs proved immune to Israeli interception with F-4 Phantoms unable to achieve a radar lock on them. Following the success of this deployment the Foxbats returned to the Middle East twice more, prior to and during Yom Kippur.

Overseas operators of the Foxbat proved to be just as effective as their Russian counterparts and claimed kills with the Mach 3.0 fighter, although these remain in dispute to this day. The first of the claims was by Syria against Israeli F-15s. Following a carefully planned ambush by the IDF/AF, two F-15s went head-to-head with a pair of Foxbat As. During the engagement, each side was to loose an aircraft. The Foxbat

The immense size of the MiG-25 can be judges by the maintenance personnel standing by this Foxbat E.



A close-up view of the MiG-25RBS's soft-edged, black anti-glare panel.

A Norwegian Air Force fighter intercepted this fully armed Foxbat near to Norwegian airspace. There were many instances were pilots from both sides got involved in 'mock' dogfights achieving radar-locks on one another. Full details have and are unlikely ever to be released.

A Foxbat E shadows a NATO intelligence gathering aircraft in 1988 as the USAF RC-135 approaches the Kola Peninsula. The Foxbat is carrying live missiles under its wings.

Awaiting take-off instructions from the tower are a MiG-25RBK (foreground) and a MiG-25RBS. The soft edge to the Foxbats' black anti-glare panel can be clearly seen. For most mission reconnaissance MiG-25s were flown clean in order to offer maximum performance.

The patch worn by Indian Air Force Foxbat pilots at the retirement of the MiG-25RBs in 2006. One Foxbat was placed in the Indian Air Force museum for display.

claimed its kill through the use of two R-40 AAMs.

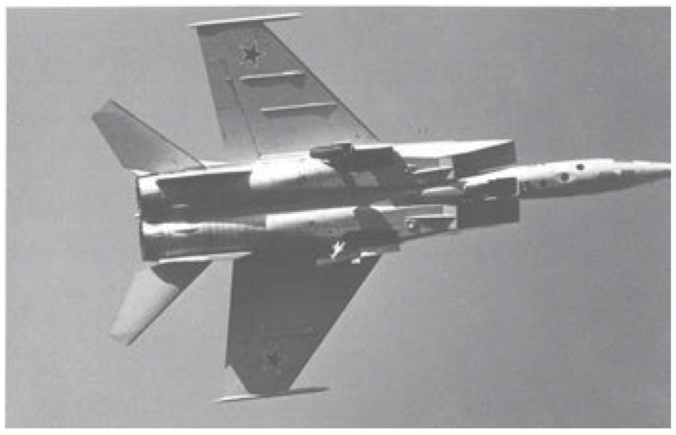
Iraqi Foxbats proved equally successful during their war against Iran, conducting numerous combat missions. Its eight MiG-25RBs struck Tehran and Iranian oil rigs, although at least one was downed by an Israeli Hawk SAM when it strayed into Israeli airspace. During the opening night of Desert Storm an Iraqi MiG-25P downed a US Navy F/A-18 Hornet, although this was soon tempered by the loss of two Foxbats to USAF F-15Cs a few days later.

Foxbat Finale

When it entered service the Foxbat was the height of Mikoyan's technical capability, and although the aircraft in some way did not live up to all its expectations once the West discovered 'some' of its secrets, the MiG-25 achieved more than just a speed of Mach 3.0. It sent the West's military into panic, with analysts producing classified reports that in many cases were not based on factual evidence. It was a scenario that was to happen often during the Cold War, with Western defence staff keen to 'hype' a Russian piece of kit before knowing all the facts, in order to achieve for their own funding for their armed service.

While this doesn't detract from what Foxbats accomplished, it was in some way ironic that the last remaining MiG-25s in service where Russian reconnaissance Rs that were quietly retired in December 2013, at Monchegorsk Air Base in Russia's vast north-west territory. The Foxbat took the aviation world by storm, and while details of some sorties remain classified to this day it's clear that we've yet to see another operational Mach 3.0 interceptor enter wide spread operational service. ■

Clad in partial pressure suits, the crew of a MiG-25BM Foxbat F stand in front of their high altitude defence suppression aircraft. The nose is painted to simulate a standard AI radome.



A MiG-25R displays its full complement of nose camera ports.

Libya was a major foreign recipient of Foxbats receiving more than 60 examples. US Navy F-14 Tomcats intercepted this Foxbat A over the Gulf of Sirte. It is carrying one infrared (port) and on radar-homing (starboard) versions of the AA-6 missile. The MiGs were based in Tripoli during Colonel Gaddafi's regime.

Indian Air Force received six MiG-25RBs, which served with 102 Squadron solely in the reconnaissance role. A pair of MiG-25RUs was purchased to train Foxbat pilots. The MiGs conducted reconnaissance flights over China.

Confrontations between the US Navy and Libyan Air Force were regular occurrences throughout the late 1980s and early 1990s. Foxbats routinely flew aggressive sorties against US carrier battle groups operating in the Gulf region.

A Ukrainian Air Force MiG-25RBS serves as a gate guardian at a military base. Following the break-up of the Soviet Union 79 Foxbats entered limited service with the nation. But a lack of spares and pilot currency soon saw the type withdrawn from service.

After the US invasion of Iraq in 2003, much of the Libyan Air Force had been destroyed, those aircraft had not been bombed or wrecked on the ground were buried in the desert, in the unlikely event that they could possibly be returned to service at the end of the war.

At least one Iraqi Air Force MiG-25RBK was brought back to the United States in order to be displayed at the USAF museum. Rumours persist that other examples were also brought back and disappeared into various undisclosed intelligence agency facilities.

1/72 SCALE
WAR BIRD COLLECTION
24

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ONE, ONE, FOUR FOUR NEWS

ROY KINSELLA ROUNDS UP SOME OF THE LATEST RELEASES FROM THIS INCREASINGLY POPULAR AIRCRAFT SCALE. THIS MONTH HE LOOKS AT ...

PLATZ

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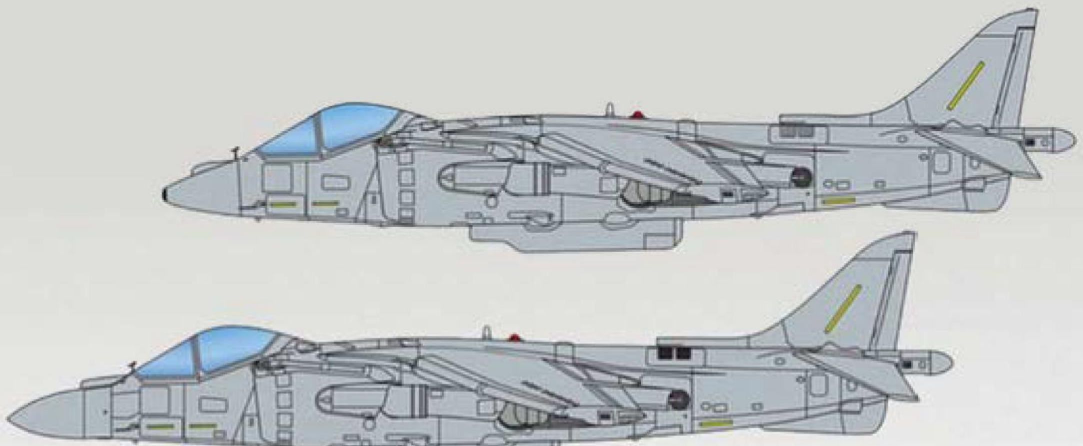


1:144 FLYING COLORS SELECTION - AV-8B HARRIER II (TWO KITS IN THE BOX)

Platz are releasing yet another interesting kit in July, which already has tongues wagging. The AV-8B Harrier II should be hitting the shelves during the summer and expectations are high that this will be another mouthwatering kit.

Suggested build options available to the builder will include; Nighttime attack capable AV-8B(NA), RAF Gr.5/7 and the final evolutionary type, the AV-8B Harrier II Plus.

Decals will be produced by Cartograf.

A. An AV-8B Harrier from the 24th Marine Expeditionary Unit (24th MEU) Air Combat Element (ACE) commences his 'roll take off' bound to engage targets over Iraq from aboard the amphibious assault ship USS Nassau. (US Navy)

XB-70A parked on a ramp at Edwards Air Force Base in 1967. (NASA via Wikipedia)

ARMORY

armorymodels.com

NORTH AMERICAN XB-70 VALKYRIE

Armory are really establishing themselves as big 1:144 scale producer, especially now after announcing their plans to release the North American XB-70 Valkyrie later in the summer or early autumn.

The kit will include detailed wheel wells and bomb bay, which will include missiles inside. The aircraft will be built in a number of configurations allowing the builder to choose between takeoff, landing and supersonic flight configurations. Interestingly the wingtips will be capable of being mounted at three different angles. No doubt this will be a very exciting kit.

FINAL THOUGHTS

WHEN INSPIRATION HITS...

Over the years my aircraft modelling has been to put it mildly, rather military in nature. I can count on the fingers of one hand the number of civilian aircraft that I've built, let alone actually completed. Over the last few years though, I've found myself gravitating more and more towards the lighter and less warlike subjects, admiring pictures of light aircraft and learning a little more about them as they fly over the house.

Last weekend, as part of my 50th birthday present, my wife and I travelled over to Sleap Airfield in North Shropshire so that I could enjoy a trial flying lesson. And enjoy it I did! Along with the lesson and the food served in the restaurant that sits atop the wonderfully historic control tower, I was also able to watch the world go by and admire some of the delightful aircraft that came and went through the afternoon, one of which was the Piper L-4 that you see here.

Unable to resist the temptation to take a closer look, I scuttled over to where the aircraft was parked and got chatting to the pilot who described how he had owned the aircraft for around ten years and that it was always painted in the pseudo-training colours that you can seen in the pictures, colours that were perfectly applied.

I was hooked!

What a gorgeous machine and the perfect basis for a wonderful little model. Having bought both the Bronco Piper L-4 and the later, Revell Super Cub, I have certainly enough to create something similar and now thanks to the images that I took on the day, I have the reference as well! What more could I ask for?

Isn't amazing how inspiration can hit when you least expect it? Now, where are those kits..?

See you next time!

"What a gorgeous machine and the perfect basis for a wonderful little model"

Bf 109G-10
1/48
Mtt Regensburg
NEW TOOL

ONE, ONE, FOUR FOUR NEWS

ROY KINSELLA ROUNDS UP SOME OF THE LATEST RELEASES FROM THIS INCREASINGLY POPULAR AIRCRAFT SCALE. THIS MONTH HE LOOKS AT ...

PIT ROAD

www.plazajapan.com

ME 323 GIGANT

The Messerschmitt Me 323 Gigant ("Giant") was a German military transport aircraft used during World War II. It was a powered variant of the Me 321 military glider and was the largest land-based transport aircraft of the war. A total of 213 are recorded as having been made, a few being converted from the Me 321. The Me 323 was the result of a 1940 German requirement for a large assault glider in preparation for Operation Sea Lion, the projected invasion of Great Britain. The DFS 230 light glider had already proven its worth in the Battle of Fort Eben-Emael in Belgium (the first ever assault by gliderborne troops), and would later be used successfully in the invasion of Crete in 1941. (Wikipedia)

Pit Road have long been established as a leading producer of injection-moulded kits for many years. If you have ever built their J35 Draken, TSR 2, RAF Vulcan and Victor kits to name just a few, then you will already know the potential this latest announcement is expected to offer.

The Messerschmitt Me323 Gigant (Giant) was a German Military Transport aircraft designed and used by the Luftwaffe during WWII. It was a propeller engine variant of the earlier produced Me 321 glider and was the largest land based transport aircraft of the second world war. 213 are recorded as being produced with some even being converted from the Me 321 glider.

Just looking at the build photos of this monster aircraft it's already mouthwateringly intriguing and looks to be incredibly detailed with a full interior and the option to display the aircraft with the front doors open too.

Pit Road are due shortly to release their Me323D-1 Gigant. As with some earlier Pit Road kits such as the RAF Avro Vulcan and Victor kits, the Me 323 will also be in collaboration with G.W.H (Great Wall Hobby), the latter expected to be more readily available to western markets later in the summer.

The French Air Force Rafale B makes a spectacular exit from RIAT 2018. We heard the cheer from the French members of the crowd as they won the World Cup Final on Sunday afternoon.

WRITTEN AND PHOTOGRAPHED BY ALAN FIRBANK

ROYAL INTERNATIONAL AIR TATTOO 2018

Enjoy many of the highlights from this year's spectacular show that in turn celebrated the 100th Anniversary of the Royal Air Force.

The world's largest military air show seems to come around increasing quickly as the years go by. This year, the RIAT theme was the celebrations of the RAF's 100th Anniversary. The show's organisers make a big effort every year to put on a spectacular event but the anniversary demanded something extra special. A large number of aircraft attended and some were probably there because of the special occasion. Several aircraft visiting from overseas included the RAF 100 logo.

Worth a special mention was the superb weather with which the show was blessed. Apart from an hours rain on Friday lunchtime, the sun shone almost all of the time and there was no further rain, a welcome contrast to the often-wet 2017 show. It was not the hottest RIAT that I have attended but not far off. The last year the SR-71 attended was probably the hottest ever.

That shower on Friday lunchtime could not have passed through at a worse time from the flying point of view. The 100 aircraft flypast for the Queen on the Tuesday before RIAT went off perfectly in the sunshine over London. We had been promised a watered-down version of that fly past on Friday by about half the aircraft but the heavy rain shower when the fly past was due to take place, resulted in a much diluted version.

It was good to see some very interesting items in the static display. One was the Japanese Kawasaki C-2 that had made a three-day flight from home to Fairford. A 'first'

The Ukrainian Flanker pilot awaits instructions in the hot sun on the Thursday before the show.

Frecce Tricolori depart on Monday following the show. Next year they plan to be in new aircraft.

Great to see the Flying Bull's Bristol Sycamore Mk52 at Fairford. This is the only flying example of the iconic helicopter in world today.

One of several Gripens at the show, this JAS 39C from the Swedish Air Force heads for home.

The USAF Heritage Flight perform their three-ship display with a F-35A, Spitfire and Mustang.

The two Mirage 2000Ds of Couteau Delta perform their polished pairs routine at RIAT 2018.

The No. 617 Squadron Tribute formation, for this year only, with the BoBMF Lancaster, a Tornado GR.4 and the RAF's brand new F-35B Lightning II.

The Swiss F-18C Hornet breaks away from the NCPC-7s before their display routines.

An ex-Swiss Air Force Hunter F58A now owned by the Hunter Team sets course for Scampton after the show.

This brand new Embraer KC-390 dropped into Fairford for a couple of days on the way to the Farnborough Air Show.

The Norwegian AF Historical Squadron's Vampire T55 and FB6 performed a lovely pairs display at Fairford.

No. 51 Squadron's RC-135W makes a rare visit to Fairford. Here seen as it leaves for RAF Waddington after the show.

An old design still performing a useful function, this Antonov An-2 operated by the Estonian Air Force sets off on its long flight home.

We tip our hats to the artist that applied the paintwork to the PAF C-130E. Excellent work.

This CH-146 Griffon (shades of ‘Chippy-Ho’) arrived at Fairford inside the CAF CC-177 Globemaster II. The pilot told me he was wishing he could have flown in the show.

One of the RAF’s first batch of four F-35Bs performs a short hover routine before returning to RAF Marham.

The Belgian F-16AM’s pilot show us the top side of his jet as he departs Fairford on Monday.

A USAF F-35A makes a noisy departure from Fairford to meet the Spitfire and Mustang of the USAF Heritage Flight.

Now with an extra fuel tank on the centreline pylon, the CAF CF-118 Hornet leaves Fairford’s runway for home.

The Shuttleworth Collection’s immaculate Avro Tutor leaves the RAF’s 100th Anniversary celebration weekend.

BoBMF’s Lancaster tucks in the undercarriage as it takes off for its display.

The Hunter Team’s immaculate F58A as it lifts from the runway. The splinter scheme was not to the liking of all but we loved it.

Ukraine’s Il-76MD taxis along the loop at the west end of Fairford’s runway on arrival for RIAT 2018.

that made the news was the arrival of the General Atomics MQ-9C SkyGuardian drone that had made the first trans-Atlantic drone flight from Grand Forks, North Dakota to RAF Fairford. This would be probably the slowest powered trans-Atlantic flight, taking about 24 hours. Not all of that was over the sea and the drone was held in Fairford’s circuit for a while before being cleared to land. It is remarkable that the aircraft can stay in the air for so long, unrefuelled. A nice touch was the addition of some RAF markings to the drone while it was at Fairford.

There is a general feeling amongst aircraft enthusiasts that the RAF could have made more of an effort regarding 100th Anniversary paint schemes. We are told that all that extra paint costs too much money. The RAF 100

The MQ-9C SkyGuardian drone rests in Fairford’s static park after its 24-hour epic flight from North Dakota in the USA.

This is a nostalgic sight, the Westland Whirlwind HAR10 flown into Fairford for the show.

logo carried on several aircraft will look fine on a letter heading, but does nothing to impress on the tail of the display Typhoon, etc. The superb paintwork on the Pakistani Hercules put us to shame. Several other aircraft carried spectacular schemes and one of our favourites was the CAF Hornet. For several years the Canadian Armed Forces' display aircraft has carried an amazing paint job and it was a treat to see this one at RIAT 2018. Let us hope that their participation this year is the first of many. Another paint scheme that attracted attention was that on the Hawker Hunter F58A brought to the show from its Scampton base by the Hunter Team. The spectacular splinter scheme has not been greeted with universal approval, there are those who think that a Hunter should be painted Dark Sea Grey and Dark Green however, we are with those who love it.

One surprise item that did nothing to get the pulse racing was the single flyby of the B-2. I expect there were those attending on Saturday that did not even realise that it had been and gone. All that flying from America and back for just one pass at height!

Another fairly last minute inclusion was the team from the Ukrainian Air Force with their Il-76 and a pair of Flankers, a two seater for the static park and a single seater for the flying display. Sadly, two special items from other Russian factories did not make the show, a MiG 21 and MiG 29 were cancelled as a result of recent accidents. Also, 2018 must be the first RIAT for a very long time without a Phantom in attendance. We saw the final RIAT appearance of an RAF Tornado as the last remaining ones are due to retire before the next show. It was good to see a Tornado in the flying display for the last time, as part of the No. 617 Squadron tribute with the Lancaster and one of the new 617 Squadron F-35Bs. No doubt we will still see Tornados from Italy

The Pakistani Air Force C-130E, in all its glory, sets off for home taking the richly deserved RIAT Concours d'Elegance Trophy with them.

The colourful half of Couteau Delta, the Mirage 2000D leaves on Monday morning.

The JASDF Kawasaki C-2 leaves for the long flight back to Japan. It was so good to see them at the show again.

Slowly cooking in the strong sun, the Tornado's crew wait to move to their parking place on arrival at Fairford.

One of Spain's Patrulla Aguila Casa Aviojets leaves for home after a busy weekend at Fairford.

The RAAF E-7A Wedgetail leaves for a few days at RAF Waddington before going home to Australia. We loved the nod to the RAF 100th Anniversary on the rear fuselage.

What a lovely arrival, the Ukrainian's back at Fairford with two Flankers and the Il-76.

and Germany for a few more shows in the future. 2018 was also a farewell to the Frecce Tricolori in their Aermacchi AT-339s. They are due to swap to the T-346A next year. It will be interesting to see how the team's red, white and green colours look on the chubby trainer.

Finally, congratulations to the RIAT for organising such a spectacular show again this year. RIAT 2019 will be held on July 19, 20 and 21. I have my tickets booked already. If you want a good seat, you have to get your skates on.

We bring you some photos from the show for those who could not attend and a reminder of a great event for those who were lucky enough to be there. ■

The Su-27P1M Flanker waits to back-track along the runway to its parking place for the weekend.

BoBMF Spitfire PR.XIX takes off for its part in the Flight's display.

Good to see the diminutive Folland Gnat at Fairford again this year.

We don't see the German Air Force C-160D Transalls very often these days. This was probably used to bring the beer for the weekend! The Germans always host a party on Saturday evening at the show.

The Su-27UB1M Flanker drops his braking parachutes on the loop on arrival at Fairford.

WRITTEN BY GLENN SANDS

PHANTOMS ON THE DECK

WE TAKE A DETAILED LOOK AT THE F-4 IN ROYAL NAVY SERVICE.

Forty years ago, the Royal Navy was in the same position that it will soon find itself in today, operating two aircraft carriers equipped with the latest naval aircraft the West has to offer. Although the technology between now and then can't realistically be compared, but for many aviation enthusiasts and modellers it's still the sight of Phantoms, Buccaneers, Gannets and Sea Vixens landing aboard HMS Ark Royal and HMS Eagle that demonstrated the pinnacle of the Fleet Air Arm's capabilities during the Cold War.

For the Phantom, despite the aircraft's remarkable operational record with the US Navy the British Government, in an effort to appease the aircraft industries in the UK, which were under considerable strain due to a lack of orders and had recently suffered the cancellation of the P.1154. The latter was intended for the RAF, but if suitably modified could have served as a replacement for the ageing Sea Vixens of the Fleet Air Arm. The cancellation of the P.1154 by the British Government left the RAF with no home-grown option for its primary fighter requirements, and no work for its highly-respected aviation companies. Against this back drop the McDonnell Phantom II had been openly discussed with senior staff within the Royal Navy and a number of British test pilots had inspected the type in the US. At that time, the Fleet Air Arm was still expecting to receive modified P.1154s but following its cancellation, McDonnell was awarded a development contract for a Royal Navy Phantom variant. To appease some of the British aerospace industry parts of the new Phantom II would be built by sub-contractors within in the UK. The most significant of which was the replacement of the turbofan J79 engines with Rolls-Royce axial-flow Speys, which necessitated 20% larger air intakes. These powerplants, with higher thrust, were deemed necessary in order to get the F-4 safely on and off the smaller decks of the Royal Navy carriers. Although senior staff within the Royal Navy were pleased with the selection of the Phantom, given the operational record the jet had with the US Navy, the decision to change the engines would result in a host of problems, some of which would not be resolved until 1972, eight years after the contract was

Phantom FG.1 XV587 is launched off the waist catapult of HMS Ark Royal. The aircraft is carrying a blue inert AIM-9 Sidewinder on its inner pylon.

The first YF-4K XT595 prototype prepares to land after a test flight from St Louis in 1966 with a McDonnell's aircrew aboard. It was equipped with a long boom sensor for the collection of data and carried two inert Sparrow AAMs in the forwards bays. (All images Glenn Sands Collection)

In September 1968, 700P Squadron displayed its Phantoms at the SBAC show at Farnborough, XT859 and others had been painted with a large Phantom character emblem on the tail; it comprised a Dayglo red diamond, on which was a black figure with white eyes and a Union Jack waistcoat. Unusually the rear cockpit is unoccupied.

For the 1977 Silver Jubilee Review, Fleet Air Arm FG.1s wore specially applied nose markings comprising a red/white/blue flash and a yellow '77' and crown. The blue can hardly be seen against the black radome. This Phantom lacks the white serial numbers on its nose.

This FG.1 XT859 served with 700P Squadron at RNAS Yeovilton before being passed on to the Royal Navy Detachment at RAF Leuchars. It would later go on to serve with the RAF.

originally signed.

Based on an F-4J, the Royal Navy variant, designated the F-4K initially required numerous engineering changes in order to be accommodated aboard British carriers. A folding nose was introduced and the rear fuselage fuel vent was shortened by six inches. This allowed the new version to fit on to UK carrier lifts. Further modifications included a redesigned rear fuselage, enlarged blown leading edge flaps, slotted stabiliators, stronger landing gear and arrestor hook. To allow for a greater angle-of-attack when on the catapult, the nose gear strut was increased by 40in. This allowed the jet to take-off at full-up weight by increasing the pitch of the nose which in turn reduced the wind-over-deck requirement. As the Speys had greater thrust than the J79s, the engines were able to provide more bleed air for the leading and trailing edges during the landing approach to the carrier deck, allowing for a slower approach compared to US Navy versions.

While the Spey engine issues are widely known and rumbled on in the background for many years, the service introduction of the Phantom into the Fleet Air Arm, on paper looked to be a relatively smooth process. However, it was to be the constant interference of the British Government from the side lines that would continually delay the acquisition period that would inflict the most damage.

Teething Problems and Flight Tests

The prototype Phantom for the Royal Navy, YF-4K XT595 flew for the first time on June 27, 1966 from Lambert Field St Louis. It was followed two months later by XT596 on August 30. Both YF-4Ks were fitted with long static probes mounted on the tip of the radome. Each aircraft conducted numerous flight tests in the US before flying to the UK to continue trials work.

The first pre-production F-4K XT597 took to the air on November 1, 1966 and was a better representation of how the Phantom would be equipped in operational Fleet Air Arm service. While the engine problems were continuously worked on in the back-ground, an agreement was reached between McDonnell and Rolls Royce whereby a non-fully functioning Spey could be installed in a test aircraft, so allowing the flight test programme to continue. It was agreed that the majority of the remaining engine problems would be resolved once the jets were in the UK, by the MOD and the Aircraft and Armament Experimental Establishments sites which were involved in the programme. As a precaution a list of flight restrictions were imposed on early aircraft until a suitable engine fix was found. Despite the technical problems, the F-4Ks started to arrive in the UK.

The British quickly dispensed with the F-4K designation and adopted the Royal Navy's allocated designation FG.Mk 1, often shortened to simply FG.1 in squadron service. The first 'true' production FG.1s, XT857 and XT858, both of which contained significant amounts of British equipment, were at first allocated to test duties in order to speed entire acquisition process along. A later number of early FG.1s were loaned to Royal Aircraft Test Establishments such as Bedford, Boscombe Down and the Rolls-Royce test facility at Hucknall near Nottingham.

By early 1967, the entire programme was now running behind on both side of the Atlantic, and the Fleet Air Arm was keen to get the Phantom into operational service and aboard the Royal Navy carriers so that they could retire the Sea Vixens.

It was not until April 30, 1968 that the Fleet Air Arm could commission its first unit, 700P Squadron at RNAS Yeovilton. Its first three Phantoms had flown directly from the US the day before. The squadron was to function as the Intensive Flying and Trials Unit (IFTU) for the FG.1. The unit never numbered more than five jets and often these early examples

Under an overcast sky at RNAS Yeovilton, FG.1 XT860 demonstrates the vivid Dayglo tail marking worn by training unit No 700P Squadron.

On display in the static park for the Battle of Britain at Home Day at RAF Abingdon in September 1973, was FG.1 XT861 which was serving with the PP-OCU.

Devoid of any squadron markings XT859 of 700P Squadron taxies past a line-up of VIPs during at open day at RNAS Yeovilton.

were loaned to various test establishments for weeks at a time which did not help with process of trying to get an initial cadre of qualified Fleet Air Arm Phantom aircrews. The highlight of the IFTU's short career was their attendance at the 1968 Farnborough Air Show. The unit sent two FG.1s XT859 and VL725 which flew every day of the show and part of the demonstration included sonic bangs on the first public day – unfortunately this only took place once.

Standing Up

By mid-1968 the Royal Navy had received 18 FG.1s; XT857-XT872, XV567 and XV568, but two of these would be passed on to test establishments for trails work. Despite the constant exchanging of individual aircraft 700P Squadron continued with aircrew training until 1969, when the training tasking was passed to newly established 767 Squadron. Formed on January 14, the new squadron took over all the FG.1s that were with 700P and steadily received more from McDonnell throughout the year. Many ex-Sea Vixen crews were to pass through the training unit during their conversion to the Phantom. At its peak 767 Squadron had eleven FG.1s on its books although one aircraft, XT876 was lost in an accident while flying with the squadron.

The Royal Navy was to have only one front line squadron equipped with FG.1s, 892 Squadron which was commissioned on March 31, 1969. A former Sea Vixen squadron many of the navigators were already extremely experienced in the primary role of air defence for the fleet at sea, so this eased the training schedule in the latter stages. At the same time 892 Squadron stood up, 700P Squadron was officially stood down although by this time the unit had no FG.1s allocated to it.

For the remaining of 1969 and throughout 1970, 892 Squadron continued its working up schedule which included a number of shore-based squadron exchanges with the Aéronavale's F-8 Crusaders. In early 1970, HMS Ark Royal finally completed its major refit and emerged from the Devonport dock yard fully equipped to operate Phantoms from its deck. The two new catapults differed only in that the waist one was slightly longer and used to 'fire' aircraft which were operating at higher weights and if the sea state was poor. But, the promised refit to HMS Eagle, which would have been equipped with a second Phantom squadron was cancelled as a cost saving measure. While the implications to the Fleet Air Arm's plans to operate squadrons of Phantoms across a two-carrier fleet was abruptly cancelled by the British Government of the day, the focus for the FG.1 aircrews were to make the maximum use of what they had received and, to get to sea as soon as possible with their new aircraft. This was against a backdrop of knowing that HMS Eagle would be decommissioned in two years and HMS Ark Royal in eight. It basically signalled the end of Royal Navy fixed-wing operations at sea even before 892 Squadron had achieved its first carrier embark!

Fortunately, in 1971, 892 Squadron did finally get aboard 'Ark' for the first of four embarks that year. Although none were more

Phantom FG.1 XV579 from 767 Squadron wore an RAF tactical camouflage consisting of glossy Dark Green and Dark Sea Grey on the uppersurfaces and Light Aircraft Grey undersides with 8in black fuselage serial numbers. Squadron markings and coding were standard. The aircraft is positioned on ground jacks while it undergoes some maintenance on its undercarriage.

than a month, the aircrew were able to practice air defence of the fleet and provide close air support to ground forces during various NATO exercises for which unguided rockets and BL755 cluster bombs began the weapons of choice.

There now begun a series of regular annual embarks for 892 Squadron which were normally spread across four cruises and 1972 was not exception. The first ran from January 19 to March 9, June 11 to June 29, September 3 to October 18 and the last running from November 7 to December 11. With 892 Squadron embarked, 767 Squadron sent a detachment to the Dutch air base at Leeuwarden for three-day squadron exchange from April 14-17. Not to miss, out at the end of the month 892 Squadron made a similar exchange with the German Marineflieger's F-104G squadron at Schleswig-Jagel.

On July 17, 1972, 892 Squadron moved its shore base from RNAS Yeovilton to RAF Leuchars, and 767 Squadron was disbanded at the naval base on August 1, 1972. The role of continuation training for naval aircrew could no longer justify a full naval squadron, the so the task was taken over by the RAF who were operating Phantoms. Designated the Phantom Post-Operational Conversion Unit (PP-OCU) and based at RAF Leuchars, the unit was staffed by Fleet Air Arm personnel. Three FG.1s, XT861, XT866 and XV570 were 'transferred' to the RAF to serve within the PP-OCU. RAF Leuchars was equipped with a practice dummy deck mirror system to assist with aircrew training.

In 1973, 892 Squadron embarked again aboard 'Ark' for two cruises from January to March and May to July. During these two cruises the Phantoms deployed ashore to RAF Luqa in Malta and NAS Cecil Field, Florida. But, when the 892 Squadron Phantoms flew off the deck on July 24, little did the aircrews know that it would be eleven months before they'd embark again. During its long 'enforced' shore-based stay at RAF Leuchars, two FG.1s were lost in accidents; XT871 and XT869.

Cruises Continue

By 1974, HMS Ark Royal and 892 Squadron were ready to go to sea again, and the year would involve three short cruises. In October the PP-OCU was renamed the Phantom Training Flight as was an indication that the RAF would eventually be taking over all Phantom operations in the future as the FG.1s were gradually transferred to the RAF.

While the fate of the Royal Navy's carrier fleet already decided, the Fleet Air Arm was determined to continue conducting a front line operational role with its Phantoms, although by this time, and with just four years to go before 'Ark' would be paid off the Fleet Air Arm had only 17 fully qualified FG.1 pilots. To resolve the shortfall RAF aircrews on exchange filled many of the aircrew positions within 892 Squadron during its final years.

Despite the winding down of the Phantom operations, during 1975 the squadron embarked aboard 'Ark' twice during which the squadron made a return visit to NAS Cecil Field. Whilst in the United States, Fleet Air Arm crews flew against USN Phantoms and F-8 Crusaders in mock air combat exercises.

Although the carrier embarks were to continue, by July 1976, 892 Squadron had just twelve aircraft on strength and the Phantom Training Flight just five. The Fleet Air Arm had lost a total of five FG.1s in accidents. Although gradually being reduced in aircraft numbers, the squadron completed two cruises aboard HMS Ark Royal and FG.1s went ashore twice to US Navy air stations for continuation training. Two short cruises were completed in 1977 and one FG.1 XV588 from the squadron was lost during a training flight from RAF Leuchars on May 18.

The final year for 892 Squadron was completed with two cruises aboard HMS Ark Royal in 1978, the first running from February 22 to March 9 and the final embark beginning on April 4, with a stop of nearly two months at NAS Cecil Field to re-join the 'Ark' on August

Phantom FG.1 XT863 from 767 Squadron at RNAS Yeovilton in September 1969. The aircraft carries the large yellow hawk emblem of 767 Squadron. This particular jet was one of the final ten to launch off HMS Ark Royal on November 27, 1978, by then it was serving with No 892 Squadron.

A low-speed pass with everything down by FG.1 XT863 from 767 Squadron during the RAF Abingdon air show in September 1971.

The rarely seen second prototype YF-4K XT596 with BAe. The aircraft wears a small Dayglo flying pig on its tail.

Phantom FG.1 XT866 W from the PTF departs RAF Leuchars for a training mission. The jet has two 370 Sargent Fletcher auxiliary tanks and a single AIM-9D exercise missile attached to the left inboard pylon.

Many parts of the world were visited by 892 Squadron while serving aboard HMS Ark Royal, including the Mediterranean in 1972-73 and the Caribbean and USA in 1975, 1976 and 1977.

An FG.1 from 892 Squadron lands aboard USS Nimitz in 1975 during its Mediterranean cruise. Royal Navy F-4s were regularly visitors to US carriers during cross-deck exchanges.

Phantom FG.1 XT876 was unusual in having RAF-style 8in high black fuselage serials. The squadron's jets were regularly flown in a 'clean' condition.

One of the last of 12 FG.1s to remain serving with 892 Squadron in 1976, XT865 was eventually struck-off-charge with the Royal Navy and taken on strength by the RAF on November 18, 1978. Of note is the grey replacement rear canopy.

A line up of FG.1 Phantoms of 892 Squadron await inspection by VIPs during the Naval Review held at RNAS Yeovilton on June 28, 1977. All the jets wear the Queen's Crown as part of their nose emblem.

8 to November 27. A further FG.1 XT868 crashed on May 12 after a flight from RAF Leuchars, this was to be the last Fleet Air Arm Phantom to be lost in Royal Navy service.

With the final cruise over the FG.1s that remained with 892 Squadron and the Phantom Training Flight (PTF) were gradually transferred to RAF squadrons. The PTF disbanded on May 31, 1978 but had given up its last FG.1 some three months earlier. Phantom training was taken over by the RAF's 228 Operational Conversion Unit.

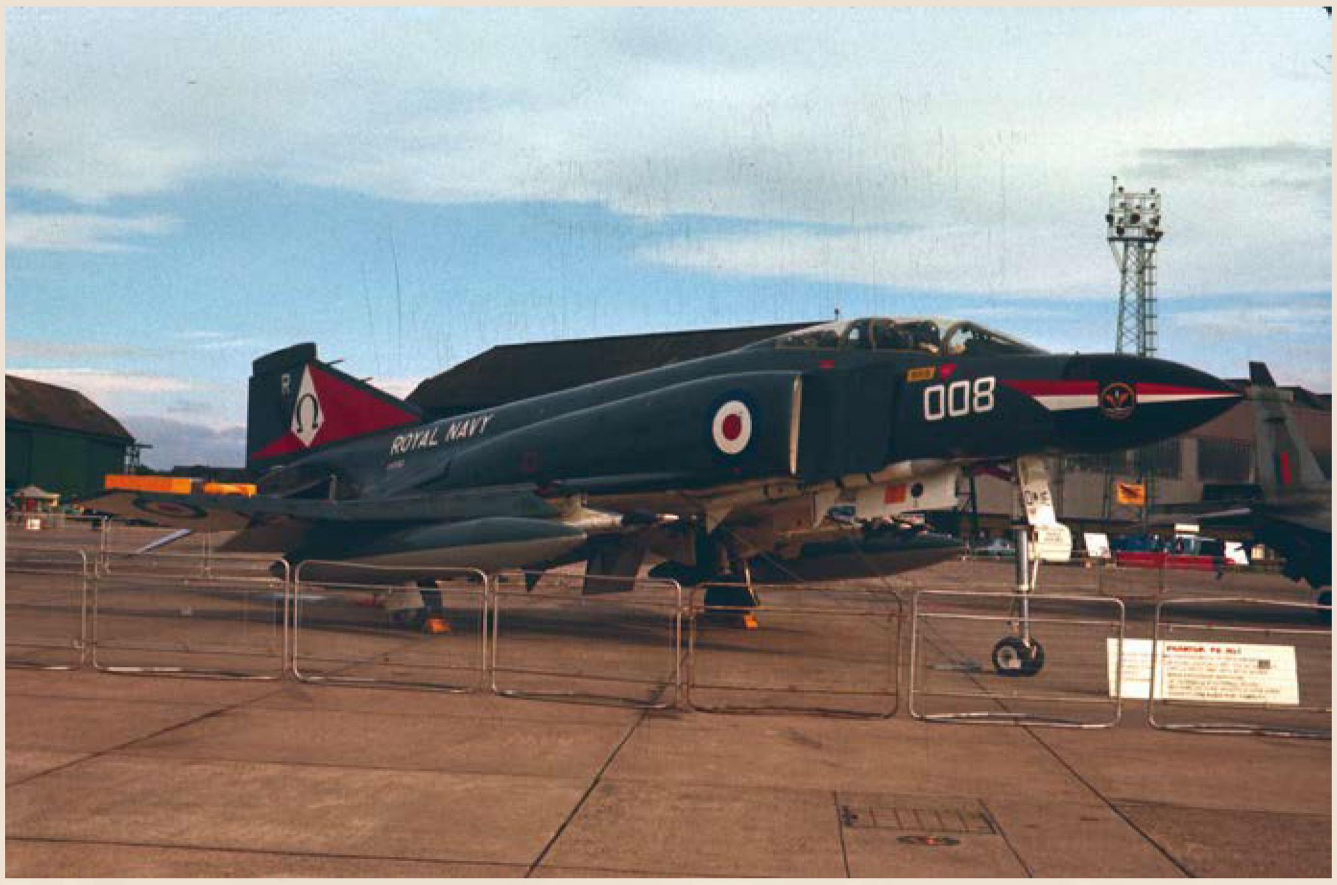
With the 'Ark' due for decommissioning at the end of 1978, aircrew knew that the disbandment of 892 Squadron would quickly follow. By July 1978, with just fourteen FG.1s on strength, the aircraft were struck-off-charge in pairs over the following weeks and allocated to the RAF.

The end for Royal Navy carrier and Phantom operations would arrive on November 27, 1978. Ten FG.1s were launched from the Mediterranean Sea and flew direct to St Athan to be repainted and have their naval equipment removed. The FG.1s began to enter RAF service in November 27. But, the FG.1s were not officially struck-off-charge until December 11, the disbandment of 892 Squadron followed four days later bringing an end to Royal Navy Phantom operations.

The Fleet Air Arm begun the 1960s with the prospect of being equipped with 200 F-4 Phantoms, two carriers to embark them and still have enough squadrons to remain shore-based to provide aircrew training and participate in regular air exercises. However, only 29 FG.1s would enter Royal Navy service and associated test units. Fleet Air Arm Phantoms would serve aboard just one carrier and eight were lost in flying accidents.

For the Royal Navy the Phantom offered the promise of a highly-capable carrier-based air defence platform that could have served within Fleet Air Arm into the 1980s, only if the original plan of updating HMS Eagle and HMS Ark Royal had been fully realised. But, it was to be politics, cost saving and indecision by the British Government that signalled the end of large-scale British carriers conducting fixed wing operations. It would take decades for this capability-gap to be addressed.

A close-up of the view of the nose of XT870 with the marking specially applied for the Silver Jubilee Review. The nose code is unusual in having rounded characters, normally the numerals were of a squarer style. Note the stencilling on the nose door.



Phantom FG.1 XV592 displays its extended nose oleo and three carrier approach lights on the nose wheel door. This particular FG.1 was the last example to be delivered to the Royal Navy. It was scrapped at RAF Wattisham in 1991.

An FG.1 Phantom lines up on the waist catapult of HMS Ark Royal during her post-refit work up in May 1970. The UK was the only country outside the United States to operate the Phantom at sea.

FINAL THOUGHTS

IT'S A BOMBER!

Next month you will see my rendition of the splendid Airfix 1:72 Wellington. There's nothing particular earth-shattering about that of course, but whilst building it a thought popped into my head that took some tome to process: in 50 years on this planet, 42 of them building plastic model kits of aircraft — many of them RAF — this was the very first time I had built a WWII RAF bomber! Honestly, I wracked my brains to see if I could remember a time when I had completed one and simply couldn't bring one to mind. Sure, I've dabbled with them and travelled at least half way down the path to the finishing of one of these important aircraft, but actual completions? Not one.

It's hard to work out why I've not really seen these aircraft as worthy of my attention. It's not as though they are mundane subjects as many are some of the most famous aircraft to fly. I think it's just that I've always seen their size and the rather drab finishes that many were understandably finished in to be less attractive than the fighters and attack aircraft that I've often concentrated on.

When I started on the Wellington, it didn't really occur to me that it was a first in my life, but as the project continued through to completion, it became apparent that it was and then I began to question myself as to why I would have avoided them for so long (if indeed "avoid" is the correct word), given how much detail they contain, how engaging their designs are and how much of a challenge many are in terms of finish, despite the aforementioned mundanity!

So my Wellington is now done and my duck is broken. I have to say that I really like the resulting model and I'm looking to do another bomber, perhaps the Airfix Whitley or B-17 that you see here. Who knows, I may even build a Lancaster, an aircraft that is as famous as it is ubiquitous on the display shelves of the world's modellers - if I can get past the idea that everyone builds a Lancaster at some point and I rather like to swim against the tide. What's that? I build Spitfires? Good point. Where's that Hannants list..?

See you next time!

"It's hard to work out why I've not really seen these aircraft as worthy of my attention"

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IN THIS ISSUE...

Written by Spencer Pollard

Hello everyone, welcome to the October 2018 edition of your favourite aviation modelling magazine!

In the last issue I discussed that I had never built a WWII RAF bomber and though a number had crossed the workbench on the way to not being completed (to my eternal shame), not one had ever made the journey from kit box to display case. Well, this month, that particular hole in my experience was filled with the Airfix Vickers Wellington. A brand-new kit from Airfix, the Wellington is a very fine product that builds into a superb model of this famous bomber. Fully detailed throughout, we decided that it would be fun to show you step by step how to get the best from the kit and overcome some of the interesting hurdles that it presents along the way. Our extended feature begins on page 30.

Over the years it has become less and less necessary to carry out kit conversions, the world's major kit companies and then the aftermarket that has grown up to accompany their products, almost everything that you could wish for in miniature. But what if there is a gap in the ranges and you want to build something unique? Well, you grab the nearest kit to what you need and start cutting plastic! This is exactly what Dean Large chose to do in order to build the Spitfire T.9 that he'd flown in, choosing the Revell 1:32 Spitfire and building everything he needed to change it into the trainer, from scratch. You can read about his amazing project beginning on page 50.

The F-5E Tiger II has always been a popular aircraft with model makers, a wide variety of kits being available to build it in most of the popular scales. The latest to appear is from Kitty Hawk who have decided to tackle theirs in 1:32 and in so doing, offered the modeller a chance to replace their aged Hasegawa kits with one that's more modern, more highly detailed and thus more in keeping with the real aircraft. Resident 1:32 aircraft builder John Wilkes builds an early sample, his appraisal beginning on page 60.

Our 1:144 series of builds continues to please our readers so this month we have a number that will once again reveal that small needn't mean less-detailed, or less impressive. We begin with Roy Kinsella's build of four (count 'em..!) EE Lightnings, built from both the Platz and Revell kits, before moving on to Haris Ali's delightful rendition of the Sweet Type 96 Carrier Fighter A5M4, a WWII Japanese fighter that's as delicate as it is, colourful. Our features begin on page 20.

AND FINALLY...

So you think that you always have to paint your models on the way to completion? What if I told you that you can finish them almost entirely in decal? Intrigued? Well, Haris Ali shows exactly how that plays out as he builds the Arma Hobby Fokker E.V, a kit that features an external finish that is predominantly decal in nature, the results being delicate and wonderfully intricate. For more on this excellent build, see Haris' article beginning on page 24…

So this is the October edition of Model Airplane International. I hope you enjoy this issue and I hope to see you again next month!

REICHSVERTEIDIGUNG
Fw 190A-8/R2 & Bf 109G-6, G-14
• Eduard Bf 109G-6, G-14 and NEW TOOL Fw 190A-8/R2
• A3 size artwork print of Fw 190A-8/R2 by Piotr Forkasiewicz
• Cartograf printed decals for 13 markings of Fw 190A-8/R2 and Bf 109G serving in Reich Defense units
LIMITED EDITION
DUAL COMBO
1/48
SEPTEMBER 2018

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The Modeller's Guide
Superdetailing, Painting and Weathering
Aircraft of WWII, with airfield accessories, ordnance and diorama
Aleksandar Pocuc
The Modeller's Guide
SCALE MODELLING: A LOVE STORY READY TO ASSEMBLE
TOOLS AND MATERIALS
TECHNIQUES
BUILDING THE AIRCRAFT
SPITFIRE MK. IXC
P-47D THUNDERBOLT
JU-87D 'STUKA'
MAKING A DIORAMA
Modeller's guide to superdetailing, painting and weathering aircraft of WWII' book is intended for both beginners and advanced modellers as it covers wide variety of modelling tasks ranging from basic detailing, scratch-building, painting, weathering, machining custom parts using resin as well as scratch-building part from brass and aluminium and of course, diorama making. Basics about tools, paints and modelling materials have been covered as well. The book revolves around three subjects. P-47D Razorback, Spitfire Mk.IXc and Junkers Ju-87D Stuka, all in 32nd scale. Step by step concept will provide a good reference and ideas to all WWII aircraft modellers regardless of their experience.
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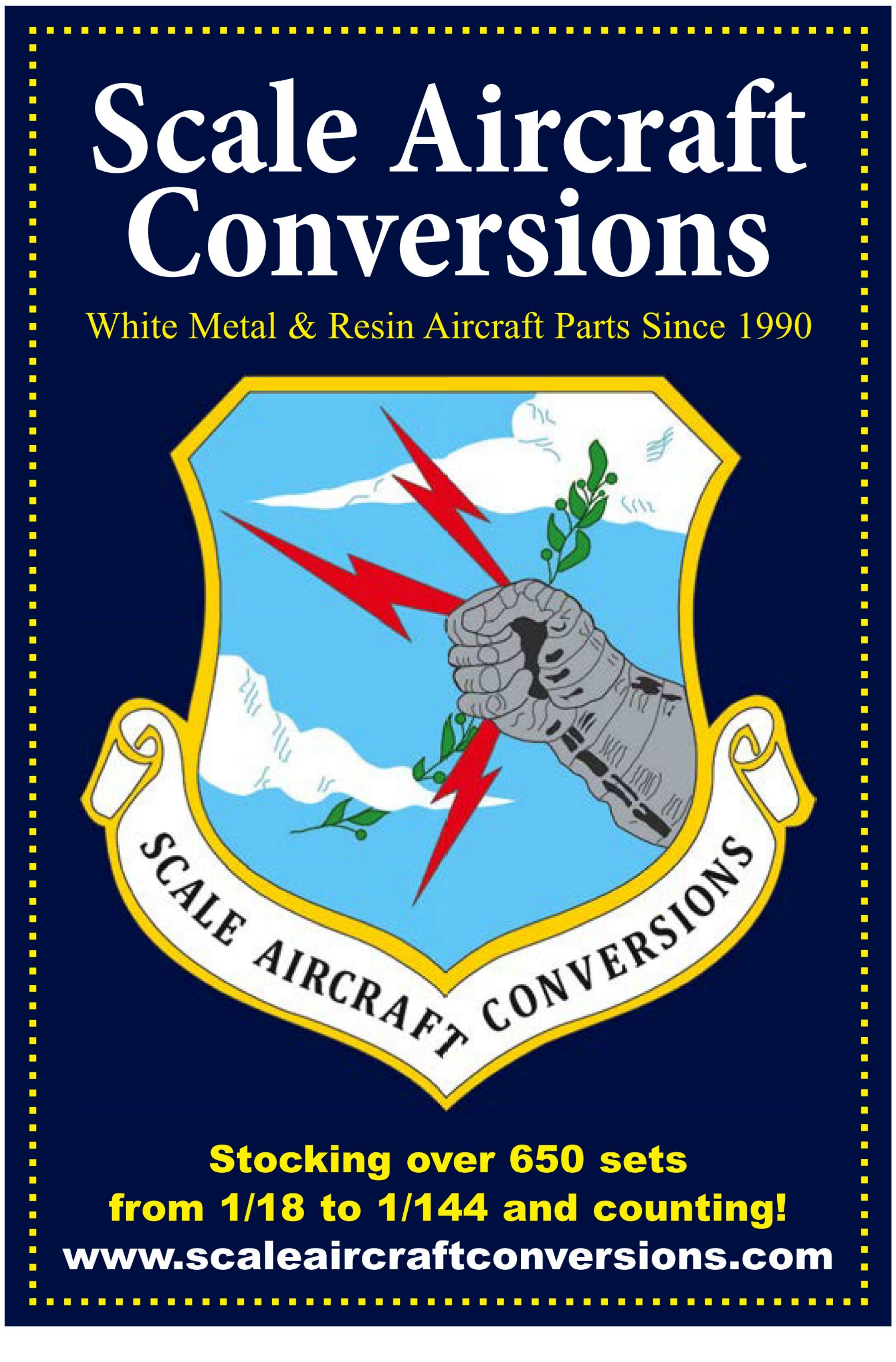

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FINAL THOUGHTS

A CHANGE IS AS GOOD AS A REST...

At the risk of this page becoming nothing more than a glorified advert for Airfix, this month I've been enjoying the benefits of one of their simpler, cheaper kits and I thought it might be worth chatting about it a little further in this column.

If you follow my work either in this magazine or Online, I'm sure you will have noticed that much of what I build is rather complex in nature, involved kits being either built from the box, or embellished in some way to create features that I think may appeal to the more advanced modellers amongst our readership. As fun as this is, it can be rather time consuming, so every so often I like to cleanse the palate with something a little simpler, going back to basics with a straightforward kit, basic techniques and a time scale that I can measure in hours, rather than days and weeks.

As this is being written I'm preparing for some time off, so rather than start a longer project, I decided to tackle the recently released Airfix 1:72 Me109E, a kit that is as simple as it is cheap, delicate as it is accurate in outline. From the off the kit was to be built from the box, paying little attention to minutiae of additional details, instead improving its look only with some carefully repositioned control surfaces, some riveting over the airframe and then a neatly applied finish - even the markings would be from the box. In essence, this would be a kit build, the manner of which would not have been uncommon as a child, simple tools and little in the way of time being needed from lifting the lid of the box, to having the model ready for display.

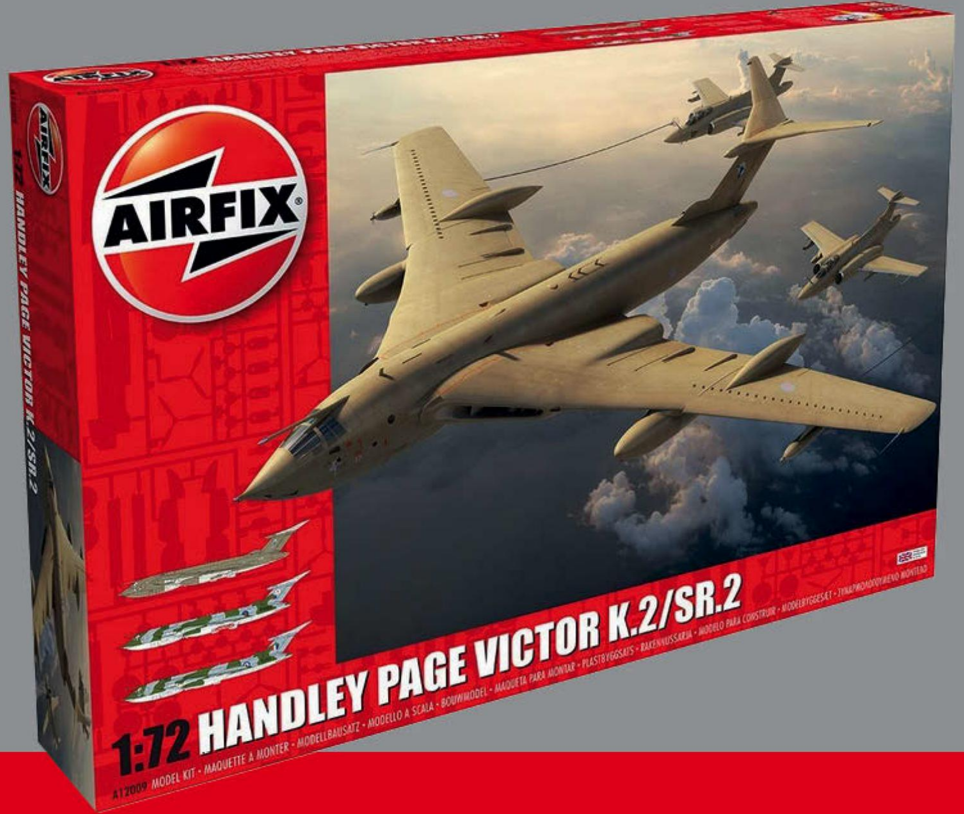
Having now completed my little Messerschmitt, the results of which you can see on the coming next month page of this magazine, I have to say that I really enjoyed the ride and will think nothing of attempting something similar at some point in the future. Not only was it a fun exercise in itself, it reminded me why I build models in the first place, not just for the challenge of completing something involved, but for the pure enjoyment that can be derived from sticking bits of plastic together and then painting the results.

See you next time!

"From the off the kit was to be built from the box, paying little attention to minutiae of additional details"

KIT PREVIEW

WE TAKE A LOOK AT THE AIRFIX 1:72 HANDLEY PAGE VICTOR K.2/SR.2



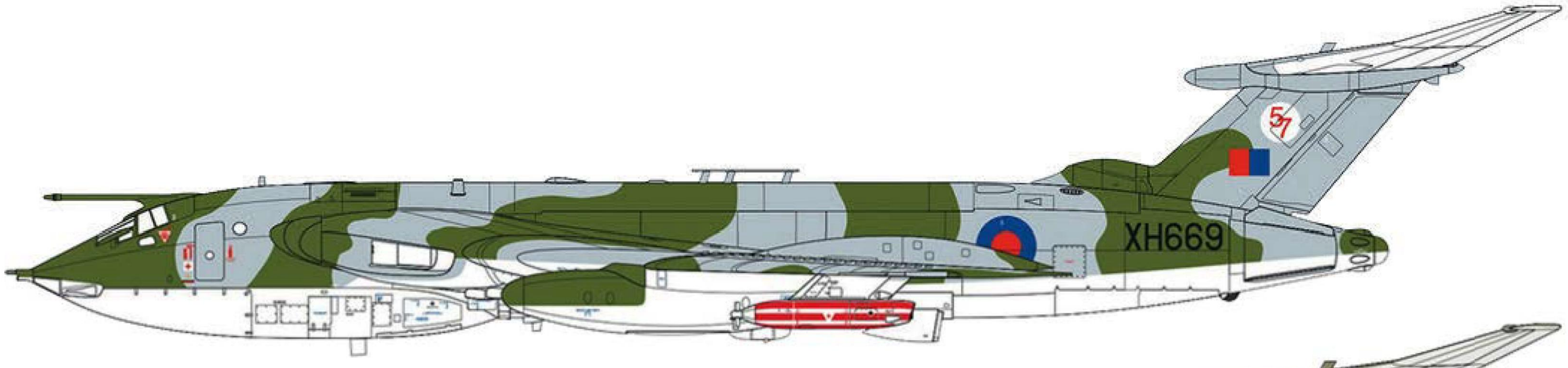
WRITTEN BY SPENCER POLLARD

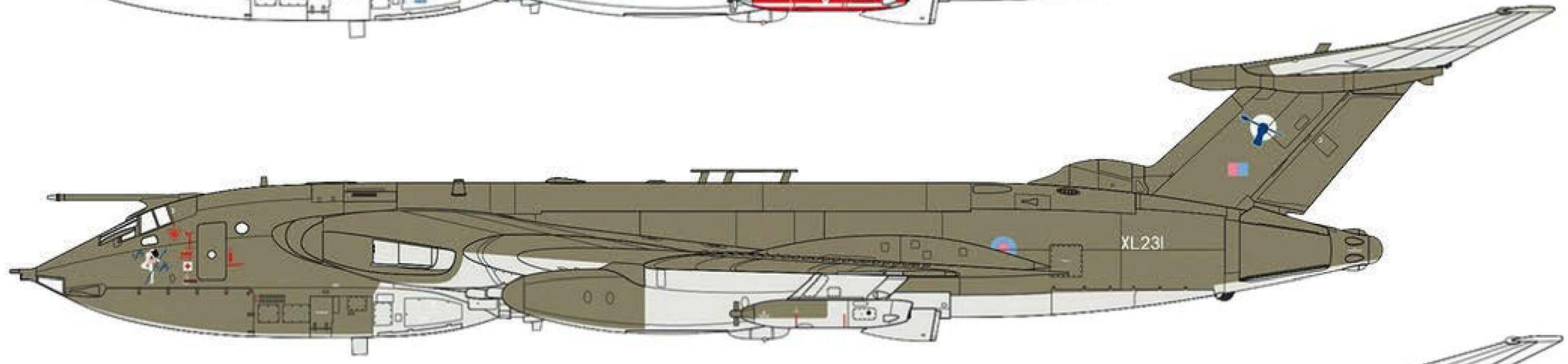
As the last of Britain's trio of V-bombers to enter service, the Handley Page Victor was arguably the most successful, remaining in RAF service for an impressive 35 years. The final K.2 versions were converted to provide the RAF with an effective air-to-air refuelling aircraft, serving through both the Falklands Conflict and the Gulf War of 1990.

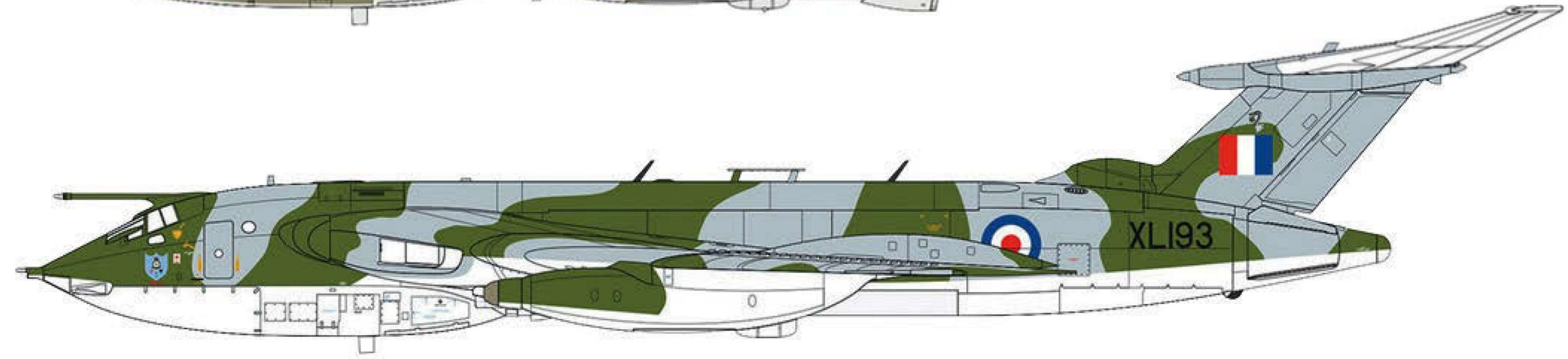
This is the second release in this small family of kits and as such allows the modeller the chance to build both the Cold War SR.2 variant as well as the later and to many, more famous, K.2 tanker. In so doing, the kit includes all of the parts needed to create both versions and then decals for three different aircraft, one SR.2 and two K2s. The choices are as follows:

- XL231 Lusty Lindy
- XH669 – Black Buck Raids
- 543 Squadron Lima Airport Peru 1971

If you are paying attention the first thing that you notice is the small label on the box that tells you that this kit is 'designed and manufactured in the UK'; open the lid and that is proven by the use of a hard dark grey plastic that's different from what we are used to in many of Airfix' recent releases. Why do I mention this? Well, because many who have built Airfix kits lately, will certainly have fallen foul of the less-than-impressive plastic that they are moulded in, soft parts often being difficult to fit accurately. Now, we are seeing this new generation of kits being moulded in harder plastic and that is helping to translate







the designer's ideas more accurately into kits that build superbly, fit accurately and are less fussy to complete. This was first seen in their P-40 and that was a dream — this kit will, I am sure be much of the same.

It is huge of course, but size has not meant that detail has been reduced to create a bland shape and keep the number of parts down. Fine features and tiny details abound. The surface of the airframe is bedecked in delicate panel lines and where needed — and only where needed — fine lines of rivets that will all combine to create a surface finish full of character.

Inside the fuselage, the designers have resisted the temptation to detail areas that cannot be seen, but have instead concentrated on the cockpit and then the capacious bomb bay, the latter loaded up for the SR.2 variant with its camera fit and then empty and covered over for the K.2. Detail is delicately realised, multipart seats complete with straps moulded in situ sit behind finely-moulded instrument panels and controls. Oddly, the pilot's instrument panel is flat and decorated with decal instruments, whereas the rear navigator's station features beautiful, raised detail! Why on earth weren't they both detailed and then decals offered for those not keen to paint the dials. Like I say, odd.

Though a complex shape, one cannot help but be impressed by the way that Airfix has broken the aircraft down to make it as easy as possible to build and in places clean up. The wings for instance with their involved intakes are moulded in such a way that you cannot really build them incorrectly, large spars and intake section that flanks the fuselage, locking into place at the correct angle to ensure that the full-span wing and then fuselage, join perfectly. The intake incidentally features full-height splitter plates and veins, so there is no issue with joints appearing where they are not wanted. The intakes are, as with the jet pipes, prototypically deep and feature engine faces and inner jet pipe detail. All in all, very impressive!

Smaller features fair equally well. We have already mentioned the cockpit, so now the undercarriage and airbrake bay can take their turn in the spotlight. Each of these sub-assemblies features a large number of small, but well-moulded parts that combine to create a highly detailed cluster of structures. It was gratifying to see that the wheels were moulded in one part, and thankfully, without weighted tyres! Just imagine trying to line up 18 individual wheels! Though there is no facility to have the model with its wheels retracted, you can display the model with the airbrake shut — though why you'd want to hide all of that lovely detail is beyond me!

The airframe is completed with the additional of the separate control surfaces, underwing refuelling pods and glazing, the latter perfectly clear and well-detailed. Moving back to the control surfaces, the kit allows all of the moveable parts to shown at whatever angle you prefer and then creates what will be an incredibly candid model. Each is superbly moulded, the flaps, such a feature of the original, being a real highlight. The pods are similarly impressive and in concert with the bright day-glow trim that you apply to each one, should look super under the large wings of this very large model.

Earlier, I mentioned the markings supplied to decorate the model. Along with the superb instruction booklet, the kit offers a large sheet of drawings for the three options supplied and then a very large and colourful decal sheet. Each image appeared sharp and in register and the colour, most important if a model is to appear realistic, bright and vibrant — especially the day-glow trim that defines both the camouflaged and Hemp, K.2s. Choosing a scheme will certainly be difficult, but I think that the camouflaged K.2 is currently top of the list - I just have too get past how long it will take to mask off the white undersides and that involved upper surface pattern! ■

VERDICT

Having not built the earlier bomber version of the Airfix Victor I was keen to see this one and add it to the list of subjects that I would tackle for this magazine. I was certainly not disappointed with the kit once it arrived; detail is superb, breakdown sensible and if care is taken and some forward planning embarked upon, I can see very little to trap the unwary during its construction and painting. As this is written I have plenty to be getting on with so this is unlikely to be started for a few weeks, but I'm certainly looking forward to beginning construction when I get the chance. We'll see how that goes in part next month. In the meantime, thanks to Airfix for the review sample seen this month.

ProfiPACK edition

Fw 190A-2 1/48

KIT BUILD

SKILL LEVEL: BEGINNER/INTERMEDIATE

SCALE 1:72

SPECIFICATION:

Handley Page Victor K.2/SR.2
Kit No: A12009
Materials: IM
Available From: All Good Model Shops
Price Guide: £59.99

BEFORE STARTING:

Tamiya Extra Thin Cement
Gunze Sangyo Mr. Cement S
Tamiya Masking Tape
Xuron Cutters
Tweezers
Swann Morton No.10 Scalpel & 10A Blades
Plasti-Zap Cyanoacrylate Glue - thin and medium viscosity
Gunze Sangyo Mr Filler Primer
Humbrol Filler
Mr. Color Thinner

BUILT AND WRITTEN BY SPENCER POLLARD

V FOR VICTOR

We build Airfix' second release of this famous Cold War bomber, the K.2 tanker.

Last month we took a look at this new kit from Airfix, giving you an overview of what the box contains and what you as a modeller can expect from it, should you decide to purchase one and start work. This month we've made a start of the kit's basic construction ready for painting and final assembly in the next issue. This little introduction takes the form of a photo-report that deals with the interior and all other major sub-assemblies and though no painting has yet taken place, I hope that it provides enough information to get the juices flowing ready for a far more extended feature in the next issue.

This then is the Airfix Victor K.2 - I hope you like it!

FINAL THOUGHTS

EVERYTHING COMES TO HE WHO WAITS...

As a young boy, I was not only excited by the idea of building kits, first from Matchbox and then Airfix, I was intrigued and motivated by those subjects that were not always available as off the shelf products. Buying my first Airfix magazines opened up the idea that you could actually convert one kit into something different and then when I started to purchase Scale Models magazine, those ideas were elevated further until one day I saw that a guy from the Netherlands had converted the Hasegawa F-E into the two-seat F-5F. I was hooked.

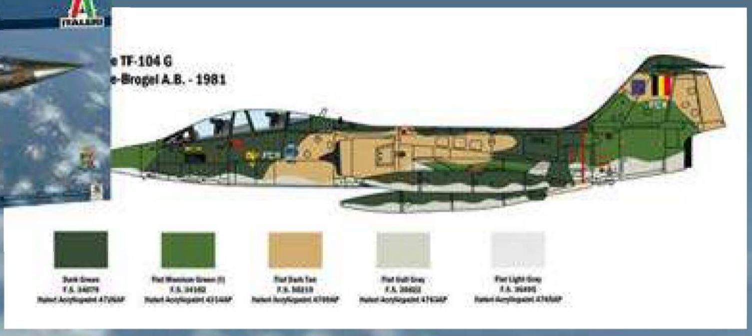
Over the years that have followed, I've considered some major conversions, even completing one in the form of the Harrier T.2 that you will have seen in 2016, but some have remained simply pipe dreams such as that F-5F and then the TF-104G, both in 1:32. I've never quite shaken the idea that they would make great looking models, but time has never been on my side despite buying the necessary kits ready to commence work. Imagine then my delight when, within 12 months, both of these subjects have been announced as mainstream kits - the F-5F from Kitty Hawk and the TF-104G from Italeri…

Modellers will tell you that we are truly in a 'Golden Age' of releases and that is certainly true. There are precious few subjects that are now not available to those willing to hunt them down and hand over the money needed to buy each one. From armour to aircraft, cars to bikes, figures and sci-fi, there can't be many subjects that aren't now directly available either from the mainstream of the industry, or those that fall within the sphere of the cottage manufacturer or aftermarket retailer. So where does that leave those of us that want too build something that's not readily available? There are still subjects out there, you just have to perhaps dig a little deeper, pick a scale that's not covered, or something that really is too esoteric for any company to touch!

As for my two pet subjects, I'm happy that I will be able to have a go at them before long, looking forward as I am with no little excitement to the possibilities available to me form both kits, and to two projects that I know will captivate me every bit today, as they would have all those years ago.

See you next time. ■

"There are precious few subjects that are now not available to those willing to hunt them down and hand over the money needed to buy each one"



61119 SPITFIRE MK1

TAMIYA

SCALE 1:48

MAGICAL MERLIN

SPITFIRE Mk.I

This Supermarine Spitfire needs little introduction, one of the best known aircraft deployed by the Royal Air Force in the Battle of Britain, as British and German forces struggled for control of the skies over the English Channel.

The Mk.1 had a streamlined form with elliptical wings designed for speed, and was powered by a Merlin Engine. Now, this legendary bird gets a completely new tooling for an updated appearance in the 1/48 Aircraft Series.

■ This is a 1/48 scale plastic model assembly kit. ■ The flowing form was accurately captured after numerous in-depth study sessions of the real aircraft. ■ Can be assembled to recreate many of the extensive Spitfire Mk.1 variants ■ Points of interest include superb detailing in areas such as the cockpit and panel lines. ■ Separate parts are used to recreate main landing gear and horizontal stabilisers. ■ Comes with one figure depicting a seated pilot. ■ Photo-etched parts are included to recreate radiator, oil cooler, gun sight, seatbelt components and more. ■ 3 marking options

1 & 2: The model can be assembled with the canopy section open or closed. Fuselage parts are moulded so as the section revealed by an open canopy is realistically thin.
3: Three types of front canopy are included; two with different bulletproof glass designs, and one without. 4 & 5: 1-piece main landing gear gives solid, fuss-free assembly and allows depiction of angle. 6 & 7: Features flat style sliding canopy section with knockout panel. With choice of 2 clear parts for initial variant reflector sights.
8 & 9: The flourless cockpit is packed with details, and the bulkheads and fuselage frame are also visible. 10: Slide in the 1-piece horizontal stabilizers for a satisfying fit.
11: Initial variant Mk.I sight is recreated with photo-etched parts.

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